The Political Economy of European Union Environmental Governance:

The Case of the Voluntary Agreement to Reduce Carbon Dioxide Emissions from New Cars

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Thesis submitted for the degree of Doctor of Philosophy

to the School of Environmental Sciences, University of East Anglia

June 2012

TO MY FAMILY, WHO MADE ME WHO I AM TODAY

Abstract

A shift from government to governance - one associated with changing power relations between public and private actors - has been reported across a multitude of policy domains, including the European Union (EU). In EU environmental policy, this putative shift has been associated with the advocacy of 'new' environmental policy instruments (NEPIs), including voluntary agreements. Uncovering the power relations that shape these instruments is key to understanding the longer term impacts of these changing governance processes. However, this aspect remains under-developed in the existing literature. This thesis therefore explores the contribution of a neo-Gramscian political economy perspective to understanding how the power relations between public and private policy actors shape the uptake of, and effects of NEPIs in the EU.

The voluntary agreement between the EU and European carmakers is the most high profile example of the employment of voluntary agreements at EU-level. It was the main pillar of the EU's strategy to reduce carbon dioxide emissions from cars between 1998 and 2008. The voluntary targets were not met, and the EU subsequently introduced mandatory legislation in 2009. Employing a documentary analysis methodology, this thesis empirically delineates the policy cycle of the voluntary agreement. It then analyses this policy process utilising a neo-Gramscian framework.

The findings of this thesis suggest that a neo-Gramscian framework provides a means for more fully conceptualising the asymmetrical distribution of power among public and private policy actors. It explains how these actors interacted through continuous processes of contestation and compromise, and how these interactions shaped and were shaped through the policy process of the voluntary agreement. Furthermore, the neo-Gramscian perspective provided insights into changes in material, organisational and ideological practices. However, in order to better account for the role of various policy actors, the framework needs to be developed and supplemented by complementary theoretical approaches.

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Thesis Acronyms and Abbreviations

ACEA	European Automobile Manufacturers Association
ANEC	European Association for the Coordination of Consumer Representation in Standardisation
BEUC	The European Consumers' Organisation
CARS 21	Competitive Automotive Regulatory System for the 21st Century
CCMC	Committee of Common Market Automobile Constructors
CEO	Chief Executive Officer
CLCA	Comité de Liason de la Construction Automobile des Pays des Communautés Européennes
CNG	Compressed Natural Gas
CO_2	Carbon Dioxide
CONCAWE	Oil Companies European Organisation for Environmental and Health Protection
COP	Conference of the Parties of the United Nations Framework Convention on Climate Change
COREPER	Committee of Permanent Representatives
CPE	Comparative Political Economy
DG	Directorate General
EAP	Environmental Action Programme
ECJ	European Court of Justice
EEA	European Environment Agency

EEB	European Environment Bureau
EMU	European Monetary Union
ERT	European Round Table of Industrialists
EUROPIA	European Petroleum Industry Association
EU	European Union
EUCAR	European Council for Automotive Research and Development
EU ETS	European Union Emissions Trading Scheme
GCC	Global Climate Coalition
GHG	Green House Gases
IPCC	International Panel on Climate Change
IPE	International Political Economy
JAMA	Japanese Association of Automobile Manufacturers
KAMA	Korean Association of Automobile Manufacturers
KM	Kilometre
LPG	Liquid Petroleum Gas
MEP	Member of the European Parliament
MLG	Multilevel Governance
MVEG	Motor Vehicle Emissions Group
NEPIs	New Environmental Policy Instruments
NGO	Non-Governmental Organisation
OPEC	Organization of Oil Exporting Countries

PPM	Parts per Million
R&D	Research and Development
SEA	Single European Act
SMMT	Society of Motor Manufacturers and Traders
SUV	Sports Utility Vehicle
T&E	European Federation for Transport and Environment
TEN-T	Trans-European Networks for Transport
TERM	Transport and Environmental Reporting Mechanism
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Nations Framework Convention on Climate Change
UNICE	Union of Industrial and Employers' Confederations of Europe
VDA	German Association of the Automotive Industry (Verband der Automobilindustrie)

Acknowledgments

This research was funded by a Lord Zuckerman scholarship between October 2007 and December 2010. I thank the late Baron Solly Zuckerman and his family for their generosity.

From January 2011 onwards I was kindly sponsored by my mother and step-father, Rena and Jörgen Levin. Thank you for helping turn my dream into reality, and supporting me throughout my studies.

Writing this thesis has been an educative process on many levels. I am grateful for the help and support of many people, who saw me through this process. Professor Andy Jordan supervised me throughout my PhD. Thank you for your endless patience, support, advice and encouragement, and for instilling high academic standards in me. Dr. David Benson supervised me in the final stages of the PhD. Thank you for taking the time to provide both academic feedback and a sympathetic ear. Dr. John Turnpenny was my second supervisor throughout most of my PhD. Thank you for your input into my research, and for your patience, advice, and support.

I am grateful to my examiners, Dr. Alan Bond and Dr. Rüdiger Wurzel for making the completion of this PhD an enjoyable task; Professor Peter Newell and Dr. Chukwumerije Okereke for inspiring me in the early days of my PhD; Dr Lorraine Whitmarsh and the participants of the REACT conference on shaping climate friendly transport in Europe for helping condense my thoughts in the completion stages of my research; and Dr. Iain Lake for his support in the final stages of writing up this thesis.

My father, Jonathan Matt supported me both technically and emotionally, and helped me immensely in the final stages of writing up and submitting this thesis. Thank you for your patience and willingness to help at any time.

My father, Jonathan Matt and my friends Marije Schaafsma, and Yael Velleman proof-read this thesis, and provided useful comments and advice. Thank you for your time and interest in my work.

My family inspired me and encouraged me to persevere in writing this PhD. Thank you for everything.

To my friends and colleagues at the UEA and beyond, Camilla Adelle, Barnaby Andrews, Harry Barnett, Marie Berry, Steven Hall, Alex Haxeltine, Anita Milman, Asher Minns, Jen Morley, Maria Parsmo, Leila Price, Tim Rayner, Angela Ritchie, Marije Schaafsma, Michelle Twena, Yael Velleman, and many others – thank you for always being friendly and helpful and putting a smile on my face.

To the administrative staff at the UEA and the School of Environmental Sciences, including Michelle Lane, Adam Noon, Elly Reynolds, Ashley Sampson, Carrie White and many, many others – thank you for being always helpful, kind and friendly.

The School of Environmental Sciences at the University of East Anglia has been my home for over 8 years. I have always been accepted and welcomed with a smile from everyone in the school. Many thanks to all those who made this place so close to my heart.

To other people whom I have not mentioned here, but who supported me in one way or another throughout this long journey – thank you.

Exploring the politics of automobility is to interrogate one of the principal phenomena which structures daily life (both materially and normatively) across much of the planet, one of the most important aspects of the global economy and one of the foremost causes of global environmental degradation. If we take ecological challenges seriously we necessarily call into question and fundamentally problematise the forms of political authority, economic production and consumption and modes of subjectivity which currently prevail (Paterson, 2007: 31).

Chapter 1
The Political Economy of European Union Environmental Governance

Introduction

In recent years, growing attention has been given, both academically and in policymaking circles, to the putative shift from 'government to governance' (Pierre and Peters, 2005: 1). Broadly, 'governance' implies changing relations between public and private policy actors (Pierre, 2000: 3). This is evident in the field of environmental policy, where the shift to governance has been associated with growing advocacy of 'new', more participatory policy instruments instead of 'older' command-and-control regulatory approaches. These new environmental policy instruments (NEPIs) include environmental taxes, labelling schemes and voluntary agreements (Jordan, Wurzel and Zito, 2005: 482). The promotion of NEPIs is associated with increasing societal complexities and interdependencies, and the need for cooperation between public and private policy actors in addressing environmental problems (Salamon, 2002: 8). A topical example of the complexities of environmental governance is governing climate change. Since many of the causes of climate change are deeply rooted in everyday activities, their governance requires cooperation between public and private actors across multiple spatial scales, and changes in 'everyday processes of production and consumption' (Bulkeley and Newell, 2010: 2). NEPIs have therefore often been advocated as a means of encouraging the participation and cooperation of private actors in climate change governance. This trend is pertinent in the European Union (EU), which aspires to be an international "climate change leader" (Jordan et al. 2010: 4).

Reducing carbon dioxide (CO_2) emissions from cars in the EU is a paradigmatic example of the complexities of contemporary environmental governance. The car plays a central role in European – society economically, socially and politically. Although the European car industry is a mature industry sector, with declining profit margins, it is still an economic powerhouse, providing employment and tax revenues, and associated with general economic growth (Paterson, 2007: 93). The car is seen as a necessity in European society, enabling personal mobility and shaping individual identities (Dennis

and Urry, 2009: 40). While its economic and social importance are undoubted, so are its environmental impacts (Mikler, 2007: 1). These include land-use change, the emissions of so-called "conventional pollutants", such as carbon monoxide (CO) and nitrogen oxides (NO_x), and most importantly for the purpose of this thesis, rising CO_2 emissions responsible for global climate change. Thus, the governance of car CO_2 emissions entails the consideration of economic, social, and environmental interests.

These challenges, this thesis argues, can be observed in the EU's attempts to govern car CO_2 emissions. The issue of reducing car CO_2 emissions first appeared on the EU's policy agenda in the early 1990s, with growing acceptance of climate change as an international policy problem. The EU and its Member States sought agreement on policy measures to curb car CO_2 emissions. Car-producing Member States supported instruments that advantaged their domestic car industries, and agreement was delayed. In 1995, the European Commission proposed a three-pillared Community strategy to reduce car CO_2 emissions (CEC, 1995). The strategy comprised three NEPIs; the main pillar was a voluntary agreement with carmakers, supported by a labelling scheme and fiscal measures to influence consumer demand. In 1998, the Commission signed a voluntary agreement with the association of European car manufacturers (ACEA). ACEA agreed to reduce CO_2 emissions from new cars by 25% from 1995 levels to 140 g CO_2/km by 2008. The targets were not met, and the EU subsequently introduced mandatory legislation in 2009. Carmakers blamed the failure of the agreement on consumer demand for larger cars, and regulatory requirements. Environmental groups, on the other hand, accused carmakers of deliberately promoting larger and more polluting, but also more profitable, cars. Hence, conflicting economic and environmental interests were observed throughout the policy process of the ACEA agreement.

This thesis seeks to examine how the policy process of the ACEA agreement was shaped through the dynamic and contested relations among economic, social, political and environmental actors across the multiple spatial scales of EU policymaking. Existing theoretical approaches to EU governance, namely multi-level and network governance approaches, have succeeded in capturing the multi-level,

multi-actor nature of EU governance. However, they do not adequately account for the uneven power relations among various policy actors, and how these shape governance processes (van Apeldoorn et al., 2003: 27). Similarly, studies on policy instruments often perceive these as neutral, technical and widely available tools in the hands of policymakers (Lascoumes and Le Galès, 2007, Kassim and Le Galès, 2010). In contrast, this thesis argues that the choice, design, implementation and reformulation of policy instruments are shaped through unequal bargaining between public and private policy actors. The thesis therefore seeks to examine the possible contribution of a neo-Gramscian political economy approach to understanding the power relations that shaped these governance processes. Explaining these relations can contribute to the understanding of how governance is conducted, who governs and why (Howlett, 2011: 145). These insights can therefore enhance theoretical, empirical and normative understandings of governance, as seen through its policy instruments.

This chapter continues by defining the concepts of governance and policy instruments. It then examines how the changing relations between public and private policy actors associated with the governance shift are observed in the uptake of NEPIs, with an emphasis on the EU. One specific type of NEPI, that is, voluntary agreements, is then discussed. The chapter argues that the advocacy of NEPIs in general and voluntary agreements in particular is emblematic of complex and contested relations between public and private policy actors across multiple spatial scales. These aspects, it is argued, are often taken for granted in the existing literature, and have therefore not been sufficiently theorised. For this reason, this chapter then introduces a neo-Gramscian political economy perspective. The aims and objectives of this thesis are then presented. The chapter concludes by outlining the structure of the remainder of this thesis.

Defining Governance: A Policy Instruments Perspective

In order to set the context for the remainder of this thesis, this section provides a definition of the term ‘governance’, and examines how this concept has been applied by

political scientists. It then turns to define policy instruments, and explores how these have been said to reflect the putative shift from 'government' to 'governance'.

Governance and Changing Relations among Public and Private Actors

While definitions of the term 'governance' vary greatly, it can be conceptualised as the array of relationships and institutions, beyond the narrow realm of government, that steer and coordinate the collective interests of society (Peters and Pierre, 2006: 209; Pierre and Peters, 2000: 1). Governance has been associated with

> [A] shift away from more traditional patterns in which governing was basically seen as 'one-way traffic' from those governing to those governed, towards a 'two-way traffic' model in which aspects, qualities, problems and opportunities of both the governing system and the system to be governed are taken into consideration (Kooiman, 1993: 4).

These changes are associated with 'the erosion of traditional bases of political power' (Pierre, 2000: 1). In particular, the rise of neo-liberal ideologies in the 1980s and 1990s resulted in the growing importance of economic actors in shaping governance arrangements (Pierre, 2000: 1-2). At the same time, societies have become increasingly complex (Pierre and Peters, 2005: 2). Governance thus encompasses networks of public and private actors across multiple spatial scales (Chhotray and Stoker, 2009: 7-11; Pierre, 2000: 1).

Governance has emerged as an area of inquiry across a wide array of disciplines (see e.g. Chhotray and Stoker, 2009 for a comprehensive review). This thesis examines governance in the field of EU political studies. The EU, it has been claimed, 'constitutes a unique laboratory for enhancing our understanding of politics in the twenty-first century. To realize this promise is the great challenge of the governance approach' (Jachtenfuchs, 2001: 260). Political scientists often emphasise the importance of either public or private policy actors for governance. Pierre (2000: 3) distinguished between state-centric and networked-based governance approaches. The former examine the role of the state and political society in governance, emphasising the vertical relations among policy actors. For example, in EU studies, multi-level governance approaches are often mainly (but not entirely) concerned with the relations among governments at different spatial scales. Network approaches analyse the 'co-ordination and various forms of formal or informal types of public-private interaction' (Pierre, 2000: 3),

focusing on horizontal relations among actors. However, the emphasis on the non-hierarchical nature of decision making risks 'denying the interplay of social interests and of masking power relations' (Lascoumes and Le Galès, 2007: 2). This is a crucial omission, as 'governance is wrapped up in the exercise of power and politics' (Chhotray and Stoker, 2009: 237). Therefore, in order to avoid analytical rigidity, a broad conception of governance, which encompasses both hierarchical and non-hierarchical relations between public and private actors, is employed in this thesis (Treib et al. 2007: 4).

The governance literature to date has been further classified into three categories: politics, polity, and policy (Jachtenfuchs, 2001: 259; Treib et al., 2007: 3-4). The politics dimension refers to the constellations and power relations among different actors. The polity dimension refers to institutional changes that range from 'market' to 'hierarchy'. This literature often perceives networks as the "new" form of governance (Salamon, 2002: 11). The third dimension refers to choice of policy instrument as reflecting changes in governance arrangements. The interactions between public and private actors involved in governing practices is driven by the ability to 'steer using a complex set of hard and soft governing tools and by network relationships that reflect the dynamic of power dependencies between the actors' (Chhotray and Stoker, 2009: 16-17). The choice of policy instrument thus illuminates the politics and polity dimensions (Lascoumes and Le Galès, 2007: 4), as policy choice is highly political, and is indicative of the ideologies of political institutions and actors (Salamon, 2002: 11). Thus, examining policy instruments can shed light on the questions of how governance occurs, and by whom. For this reason, this thesis employs a policy instrument approach in order to understand the changing relations between public and private actors involved in EU car CO_2 governance, as discussed below.

The growing complexities of society have often been ignored or taken for granted by governance scholars (Pierre and Peters, 2005: 2). These complexities need to be illuminated in order to understand 'how governance can occur through the interplay of social and governmental action' (ibid.). Further, by understanding these complex relations, the questions about 'how this fundamental steering function is performed in

any society, and about who performs it' (Peters and Pierre, 2009: 92) can hopefully be answered. Or, as put by Chhotray and Stoker (2009: 240), 'to understand governance, and make appropriate decisions about which governance practices to adopt, requires an acceptance of the role of power and politics in governance'. This is a task that governance scholars in various disciplines, but particularly in political sciences, have not yet fully addressed. This thesis therefore aims to explore the contribution of a neo-Gramscian political economy perspective to the understanding of the complexities and power relations that shape governance processes, as seen through the employment of policy instruments.

Policy Instruments: Evidence of a Governance Shift?

Like the term 'governance', definitions of policy instruments vary greatly. For example, Howlett (2011: 22) perceived policy instruments as 'the techniques or means through which states attempt to maintain their goals' (Howlett, 2011: 22). A more nuanced definition perceives policy instruments as 'an identifiable method through which collective action is structured to address a public problem' (Salamon, 2002: 19). This definition acknowledges the involvement of public and private actors in shaping the choice, as well as the design and implementation, of policy instruments. In this view, policy instruments are determined by, and determine which actors will be involved in the policy process, what role they will play, and which interests will be advantaged (Salamon, 2002: 10-11). It is therefore 'impossible to think analytically or sensibly about governance without also thinking about the tools or instruments that make it a practical reality' (Eliadis et al., 2005: 5).

The putative shift from 'government to governance' is reflected in the advocacy and uptake of new policy instruments (Howlett, 2000: 413). For example, Howlett (2000) claims that governments have turned away from 'substantive' command and control policy instruments that aim to directly affect policy outcomes, towards more 'procedural' instruments, which are 'designed to indirectly affect the outcomes through the manipulation of policy processes' (Howlett, 2000: 413). Governance scholars studying policy instruments acknowledge the increasingly complex political environments in which these are administered, and that they are shaped through

interactions among various policy actors (Howlett, 2000: 413; 2011: 145). Or, as put by Salamon (2002: 600, emphasis in original):

> [T]he task of public problem solving has become a *team sport* that has spilled well beyond the borders of government agencies and now engages a far more extensive network of social actors – public as well as private, for-profit as well as nonprofit.

Policy instruments therefore increasingly 'require developing the means for managing multiple relationships among actors that may have conflicting goals' (Peters, 2005: 363). As Howlett (2011: 145, emphasis added) notes, '[u]nderstanding *who* these actors are, and *why* and *how* they act the way they do is a critical aspect of all public policymaking activity'. However, these questions are not well addressed in much of the existing literature on policy instruments.

Instead, many policy instrument perspectives employ a functionalist view, assuming that policy instrument choice is pragmatic and that instruments are neutral (Kassim and Le Galès, 2010: 3; Lascoumes and Le Galès, 2007: 2-3; Peters, 2005: 361; Pierre and Peters, 2000: 42). For example, much of this literature is concerned with creating taxonomies of policy instruments (e.g. Bressers and O'Toole, 1998; Howlett, 2000; 2005; Howlett and Ramesh, 1995), in order to understand the reasons for their employment (Howlett, 2005: 35). In the functionalist view,

> [I]nstruments are treated as though they are readily available, at the disposal of government, needing only to be selected from a toolkit or chosen from a repertoire. The only question is which particular instrument is best for the job. Second, the approach assumes that the key issues concerning instruments is effectiveness [...] insofar as the new governance is concerned, the search for instruments is pragmatic in aim (Kassim and Le Galès, 2010: 3).

Understanding these technical effects of policy instruments is a good starting point for a more comprehensive analysis. However, academics and policy makers need to appreciate the merits of policy instruments 'not only in the abstract, but also in the contexts of the particular political, social and economic situations within which they will be put into operation' (Peters, 2005: 354, see also Eliadis et al., 2005: 7). Therefore, '[t]he best way of optimizing policies may be to look beyond the instruments themselves and into the social setting in which they – or agreements about them – are actually shaped' (Bressers and O'Toole, 1998: 236-237).

Furthermore, many studies on policy instruments address only one (or several) stages of the policy process (as discussed later in this chapter). For example, the volume edited by Eliadis et al (2005) examined the process of policy instrument choice. A comprehensive overview from Michael Howlett (2011) addressed the process of policy instrument design. Howlett (2011: 4) acknowledged that the design of instruments overlaps with both policy formulation and implementation, yet his analysis focused solely on this stage of the policy process. However, the emphasis on one stage of the policy process does not allow for a more comprehensive overview of the choice, design, implementation and reformulation of policy instruments. These stages of the policy process are interconnected. Therefore, a more comprehensive account of policy instruments needs to examine *all* stages of the policy cycle. Such an analysis could better explain the role of various policy actors in shaping policy instrument choice, design, implementation and reformulation.

The political sociology approach to public policy instruments developed by Lascoumes and Le Galès (2007) aimed to contribute to an understanding of the power relations that shape and are shaped by policy instruments. In this view, policy instruments are perceived as 'both technical and social' devices that organise 'specific social relations' between those governing and those governed (Lascoumes and Le Galès, 2007: 4; Kassim and Le Galès, 2010: 4). They 'confront actors with structures of opportunity, influencing how they behave, and privileging certain actors and interests over others' (Kassim and Le Galès, 2010: 4). Thus, policy instruments are autonomous and 'produce specific effects, independently of the objective pursued' (Lascoumes and Le Galès, 2007: 3; see also Peters, 2005: 353). These effects, or instrumentation, are seen as 'orienting relations between political society [...] and civil society' (Kassim and Le Galès, 2010: 5). Effectiveness is perceived as 'one among several potentially significant aspects of instrument use and often not the most important' (Kassim and Le Galès, 2010: 4). Policy instruments are therefore 'a form of power. Rarely are they neutral devices; rather they produce specific effects' (Kassim and Le Galès, 2010: 5). The examination of policy instruments and instrumentation is said to bring 'considerations of power to the forefront' (Kassim and Le Galès, 2010: 5), and 'reveals a (fairly explicit) theorisation of the relationship between the governing and the

governed' (Kassim and Le Galès, 2010: 6). The political sociology approach therefore provides a good starting point for understanding the complex relations among a multitude of actors that shape governance through policy instruments.

So far, the policy instrument approach in EU studies has been 'somewhat limited', and restricted mainly to functionalist accounts (Kassim and Le Galès, 2010: 1). This is a shame, since

> [A]pproaching the EU through the analysis of how instruments are chosen, how they develop and how they are operationalised poses new questions and promises to shed new light on old debates about EU decision-making, policy change and the interaction between the actors involved in EU policy (Kassim and Le Galès, 2010: 2).

Nonetheless, some contributions have begun to explore the 'new governance' debate using an instrument-centred approach, notably in the field of environmental policy (e.g. Jordan et al, 2003; 2005; Halpern, 2010). As Halpern (2010: 41) notes, EU environmental policy 'offers a fascinating case study for the policy instrument approach, since it is characterised by high levels of policy activism and widely regarded as one of the most prolific areas in term of instrument production', as discussed below.

In summary, this section argued that the term 'governance' often refers to the changing relations between political and civil society. However, the literature on governance in general and policy instruments more specifically, often takes these power relations for granted, and fails to theorise them. An exception is the political sociology approach to policy instruments, which claims that policy instruments produce autonomous effects, regardless of the objectives pursued. This approach argues that the study of policy instruments and their effects (instrumentation) can reveal a theorisation of the relations between those governing and those governed. This claim is developed in this thesis through the employment of a neo-Gramscian perspective. Before introducing this framework, the following section continues by examining in more detail the literature on NEPIs.

Governing through Instruments: New Environmental Policy Instruments

This section examines whether and how the changing relations between public and private policy actors involved in environmental governance can be discerned through an examination of NEPIs. The section continues by introducing some classifications of these instruments, and examining the context in which their advocacy emerged. Following this, the uptake of NEPIs in the EU is discussed. It is observed that their advocacy has not been matched by their uptake. Thus, a gap between the theory and practice of NEPI employment is noted. This gap extends to the literature on NEPIs, which either fails to theorise the power relations that shape NEPI employment or takes these for granted.

New Environmental Policy Instruments

The putative shift from 'government' to 'governance' in environmental policy can be observed through the growing advocacy of NEPIs (Gunningham, 2005: 335; Jordan, Wurzel and Zito, 2005: 478-9). NEPIs are said to promote participation and cooperation of private as well as public actors in policymaking (Jordan, Wurzel and Zito, 2005: 481; Lenschow, 2007: 421). They include information disclosure, market-based instruments, such as taxes and tradable permits, and voluntary approaches (Jordan et al, 2003; Tews et al, 2003). NEPIs are said to create 'incentives and procedures that induce entities to act in certain ways and to engage in internal reflection about what form that behaviour should take' (Fiorino, 1999: 447-448). However, they cannot be seen as purely procedural instruments, since they are often hybrids of 'old' (substantive) and 'new' (procedural) approaches (Héritier, 2002: 186; Knill and Lenschow, 2000: 320). Following Hood (1986: 124-5, in Howlett, 2000: 415), NEPIs can be categorised according to the governance resource used for their administration, as illustrated in Table 1.1.

Governance Resource	**Nodality (Information)**	**Treasure (Fiscal)**	**Authority**	**Organisation**
Example of NEPI	Labelling schemes, private reporting	Market-based instruments	Voluntary agreements	Environmental management systems

Table 1.1: Categorisation of NEPIs according to governance resource used

Source: adapted from Hood (1986: 124-125), Howlett (2000: 415)

NEPIs can further be placed on a continuum, such as that suggested by Howlett (2000: 416). This spectrum classifies policy instruments according to the level of state involvement. At one end of this continuum are voluntary approaches, while at the other end are compulsory approaches, and in between these lie a range of mixed approaches. Figure 1.1 illustrates how this continuum can be applied to authority-based NEPIs. NEPIs utilising other governance resources (treasure, nodality, organisation) can also be placed along this continuum. This approach suggests that most NEPIs require a lesser extent of public intervention in the policy process, although they mostly rely on mixed participation of private and public actors. These classifications are a good starting point for an analysis of NEPIs. However, they do not address the rationale for instrument choice (Howlett, 2000: 421), and the impacts of these choices. A further step towards understanding the uptake of NEPIs is therefore to examine the historical context in which they developed.

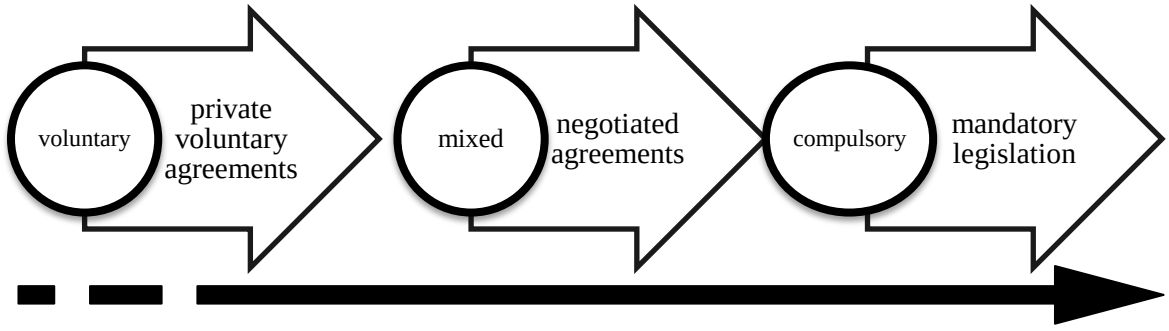

Figure 1.1: A spectrum of authoritative policy instruments

Source: adapted from Howlett (2000: 421)

Since the 1980s, the popularity of NEPIs increased across multiple jurisdictions as a result of competing environmental and economic pressures. On the one hand, the complexity and scale of environmental problems increased with the growing awareness of issues such as acid rain and later climate change. At the same time, environmental policy evolved in a 'hostile political and economic climate' (Gunningham, 2005: 333). The rise of neo-liberal free-market ideologies resulted in calls for deregulation and cuts in environmental regulatory budgets. The power of economic interest groups increased since the 1980s, and governments were under growing pressure from industry to reduce regulatory burden (Gunningham, 2005: 333). It was thought that economic actors were 'in fact better qualified than anyone else to reconcile economic activity and environmental responsibility' (Liefferink et al, 2000: 13-14). Economists were particularly keen on the adoption of NEPIs as a means of promoting economic effectiveness (Jordan et al., 2011: 539). At the same time, environmental non-governmental organisations (NGOs) and other private actors stepped in to 'fill the regulatory space that governments previously occupied' (Gunningham, 2005: 334). This resulted in a 'regulatory reconfiguration' and the promotion of 'new' policy instruments instead of 'old' command and control approaches (Busch et al, 2003: 146; Gunningham, 2005: 334; Peters and Hoornbeek, 2005: 80). This trend was evident across spatial scales ranging from the global (e.g. Paterson, 2009) to the national (e.g. Busch et al, 2005).

The advocacy of NEPIs corresponded with the notions of sustainable development and ecological modernisation, which reconceptualised the 'relationship between economy and the environment' (Weale, 1992: 76). Ecological modernisation perceived environmental protection not as 'a burden upon the economy but as a precondition for future sustainable growth' (Weale, 1993: 207; see also Paterson, 2009: 106). Joseph Huber, the 'father of ecological modernisation theory' (Murphy, 2000: 2), perceived ecological modernisation as the third stage in the development of industrial society, which followed from the industrial breakthrough (1789-1848) and the construction of industrial society (1848-1980). The third stage of ecological modernisation was driven by the need to 'reconcile the impacts of human activity with the environment' (Murphy, 2000: 2). Environmental protection was seen as a means of

promoting the 'dynamic competitiveness' of economic actors through the encouragement of innovation (Porter and van der Linde, 1995: 98). In this instance, climate change was perceived as creating not only economic threats, but also opportunities for a 'competitive low carbon economy' (Wurzel and Connelly, 2011: 14).

The quest for synergies between economic growth and environmental protection under the ecological modernisation discourse necessitated cooperation between public and private policy actors. As observed by Dryzek, (2005: 170), ecological modernisation promoted a

> [P]artnership in which governments, businesses, moderate environmentalists and scientists cooperate in the restructuring of the capitalist political economy along more environmentally defensible lines.

Therefore, ecological modernisation implied a change in the roles of the state, market, civil society and technology in environmental governance (Liefferink et al 2000: 15). Accordingly, ecological modernisation embraced a wide range of policy instruments to promote the 'invention, innovation and diffusion of new technologies and techniques of operating industrial processes' (Murphy, 2000: 3). These included a variety of interventionist regulations, as well as a range of NEPIs, and particularly voluntary agreements (ibid.). These instruments were seen as a means of reconciling the increasing tension among environmental, economic, social and political interests at various spatial scales (Paterson, 2009: 100).

New Environmental Policy Instruments in the EU

The EU began experimenting with NEPIs in the 1980s and 1990s (Jordan et al, 2003: 14; Holzinger et al, 2006: 403). The economic recession of the 1990s and growing global economic competition put policymakers under pressure to protect industry and labour, giving economic interests a reason to resist burdensome environmental regulation (Jordan et al, 2003: 14-15). Further, the limited policy-making capacity of the EU, the incomplete implementation of EU environmental policies and the subsidiarity principle prompted the EU to support the uptake of NEPIs (Jordan et al., 2003; Halpern, 2010; Holzinger et al., 2006).

The promotion of NEPIs was first evident in the third Environmental Action Programme (EAP) (1982-1986), which called for the introduction of market-based-instruments (Weale, 1992; Weale et al, 2000), and was elaborated in the fourth EAP (Holzinger et al. 2006: 404-5). The fifth EAP, introduced in 1992, promoted the notion of shared responsibility and called for broadening the range of policy instruments, including voluntary agreements. It constituted a 'comprehensive change in the dominant governance ideas' underlying EU environmental policy (Holzinger et al, 2006: 408). The programme called for collaboration between public and private actors, and allowed these actors discretion to 'optimally align their respective activities with the conditions of the specific political, social and economic contexts that exist at the national, regional and local levels' (ibid.). The advocacy of NEPIs in the EU was not matched by their application (Halpern, 2010; Héritier, 2002; Jordan et al. 2003; 2005; Knill and Liefferink, 2007). Thus, the EU largely remained a 'regulatory state' (Majone, 1994) with respect to environmental governance. One field in which the adoption of NEPIs was nonetheless evident was that of climate policy, and especially the European Climate Change Programme (Hey, 2010: 212-213).

A gap was thus observed between the advocacy of NEPIs in the EU and their application in practice (Jordan et al. 2003; 2005). However, despite the patchy uptake of NEPIs in the EU, EU environmental policy is still 'mainly structured by its instruments' (Halpern, 2010: 54). These instruments have

> [S]haped power relations within this policy domain; they have contributed to (re)allocating of resources and competencies. Policy instruments have also helped block the stabilisation of environmental issues (Halpern, 2010: 54).

The literature on NEPIs in general and in the EU in particular, has to date not adequately addressed these issues. Much of the theoretical literature on NEPIs is dominated by economists and public policy scholars. These accounts are often concerned with the general categorisation and characteristics of different NEPIs (Jordan et al, 2011: 537). Much of this literature remains normative and pragmatic, assuming that policy instruments are neutral devices (Halpern, 2010: 40). Thus, 'the messy world of everyday politics tends to be kept at arm's length' (Jordan et al, 2011: 537). In contrast, political scientists often employ empirical approaches to examine how NEPIs

are used in practice. These scholars are concerned with questions of 'who shapes instrument choices and how, who wins and loses from their deployment, and what factors lead to their (non)delivery' (Jordan et al, 2011: 537). However, this empirical richness often compensates for lack of theoretical clarity (ibid.). Thus, while scholars tend to agree that patterns of policy instruments are emblematic of changes in governance (Jordan et al., 2005; Lascoumes and Le Galès, 2007; Lenschow, 1999), they have either failed to theorise, or taken for granted the constellations of interests and power relations that shape these processes.

In summary, a shift has been noted in political studies from 'government' to 'governance'. This shift implies changes in the power relations among policy actors across horizontal and vertical dimensions of power. However, these changes have not been fully captured by the existing literature on governance in general, and on policy instruments and NEPIs in particular. This situation is problematic, since these relations need to be empirically mapped and theoretically understood in order to improve governance processes. In response, this thesis examines whether a neo-Gramscian perspective can shed light on the power relations that shaped the policy instrument choice and instrumentation of the ACEA agreement. This approach is introduced later in this chapter. The following section turns to examine one particular type of NEPI, that is, voluntary environmental agreements.

New Environmental Policy Instruments in Practice: Voluntary Agreements

Voluntary environmental agreements are an example *par excellence* of the growing use of NEPIs in environmental governance. They can be defined as 'collaborative arrangements between firms and regulators in which firms voluntarily commit to actions that improve the natural environment' (Delmas and Terlaak, 2001: 44). Different types of agreements exist, ranging from unilateral industry commitments, public voluntary programmes and negotiated environmental agreements (Bailey, 1999; Börkey and Lévêque, 1998; Dröll, 1998; OECD, 1999: 16-18). These approaches hold in common the principle of voluntarism, 'meaning that the polluters who enter into this

approach, do this on a voluntary basis without formal obligation put on them by the government' (De Clercq and Suck, 2002: 9). The ACEA agreement is an example of a negotiated agreement. Therefore, when using the term voluntary agreements, this thesis refers to negotiated agreements, unless otherwise specified.

Voluntary agreements gained popularity in light of the growing complexity and scale of environmental problems, the globalisation of environmental problems and economic systems, and an ongoing economic crisis (Börkey and Lévêque, 1998; Rehbinder, 1997). Their popularity has been attributed to a shift towards more cooperative approaches to environmental governance, and the growing importance of the private sector in environmental governance (UNEP, 1998: 5). Voluntary agreements are often associated with the discourse of ecological and political modernisation, which suggests 'fundamental changes in state intervention strategies and in the relation between state, market and society' (Liefferink et al. 2000: 14), as discussed above.

In contemporary environmental governance, voluntary agreements first appeared in Japan in the 1960s (Karamanos, 2001), and the US in the 1970s (Arora and Cason, 1995; Segerson and Miceli, 1998). In Europe, by the mid 1990s there were more than 300 voluntary environmental agreements, most notably in the Netherlands and Germany (Börkey and Lévêque, 1998; EEA, 1997). As mentioned above, the employment of voluntary agreements in the EU was advocated in the fifth EAP (CEC, 1993a), which called for cooperative environmental policymaking through the notions of shared responsibility and the 'let's work together approach' (CEC, 1992d: p. 28). This approach was emblematic of

> [T]he growing realization in industry and in the business world that not only is industry a significant part of the (environmental) problem but it must also be part of the solution. The new approach implies, in particular, a reinforcement of the dialogue with industry and the encouragement, in appropriate circumstances, of voluntary agreements and other forms of self-regulation (CEC, 1992d: point 31, see also CEC, 1996a: Article 1.1).

Thus, the advocacy of voluntary agreements can be seen as a strategy for reconciling competing interests of economic growth and environmental protection. In 1996, the European Commission published guidelines on the implementation of voluntary agreements (CEC, 1996a), reinforcing their popularity as an alternative to command

and control legislation. However, to date only a limited number of voluntary agreements have been concluded at the EU level, as these are not recognised under the EU treaties (CEC, 1996a: point 41). Since the advocacy of voluntary agreements at the EU level has not been matched by their implementation, the case study of the ACEA agreement provides a unique opportunity to examine an EU-wide voluntary agreement.

The literature on voluntary agreements has burgeoned alongside their growing use. This literature is dominated by economists, who seek to outline the costs and benefits of these agreements and their optimal design parameters, and assess their performance in terms of economic efficiency, environmental effectiveness and social equity (inter alia Alberini and Segreson, 2002; Carraro and Lévêque, 1999; De Clercq, 2002; Fleckinger and Glachant, 2011; Lyon and Maxwell, 2007; Prakash and Potoski, 2007; Segreson and Miceli, 1998; Rehbinder, 1997; ten Brink, 2002). Political scientists studying voluntary agreements tend to examine one or more of the following criteria: the political and institutional factors influencing their adoption; their degree of voluntariness; and the role of public and private actors in shaping their uptake and outcomes (see for example Bailey, 1999; Bressers et al. 2009; Eisner, 2004; Gouldson and Murphy, 1998; Mol et al. 2000; Porter and Ronit, 2006). Scholars from management and business administration disciplines often examine the motivations of firms to participate in voluntary agreements and firm-level conditions that affect implementation (e.g. Cunningham and Clinch, 2004; 2005; Delmas and Montes-Sancho, 2010; Delmas and Terlaak, 2001; King and Lenox, 2000; Lyon and Maxwell, 2007).

The critique made above regarding the literature on policy instruments and NEPIs can be applied to much of the literature on voluntary agreements. This literature is highly functionalist and normative, emphasising issues of design and efficiency, without paying sufficient attention to the power relations that shape instrumentation processes. In particular, this literature seems to take for granted the growing power that voluntary agreements bestow upon economic interest groups over environmental policymaking and the changing relations of power between public and private policy actors more broadly. In contrast, this thesis employs a critical neo-Gramscian

perspective to investigate *how* voluntary agreements shape, and are shaped by, relations of power among private and public policy actors.

A further shortcoming of the literature on voluntary agreements is that studies often focus on one stage of the policy process, such as their design, implementation or evaluation. These studies have not accounted for the different stages of policymaking throughout which voluntary agreements develop (Porter and Ronit, 2006: 45). This thesis argues that in order to better understand the power relations that underpin the instrument choice and instrumentation of voluntary agreements, it is necessary to examine their entire policy cycle, including instrument choice, design, implementation and reformulation. This thesis will therefore test whether a heuristic policy cycle approach can shed light on the interactions among various actors involved in these policy processes (De Clercq and Suck, 2002: 13-14), as discussed in some detail below.

A Policy Cycle Approach to Voluntary Agreements

Much has been written about the various stages of the policy cycle (see Hill, 2005; Howlett, 2011; Howlett et al., 2009; Parsons, 1995 for overview). While this approach is criticised for creating 'an artificial view of policy-making', it provides a useful heuristic device with which to explore public policymaking processes (Parsons, 1995: 79-80). Or, as put by Hill (2005: 143), it 'offers a way of chopping up, if only for the purpose of analysis, a complex and elaborate process'. Since policy instruments 'are the subject of deliberation and activity in all stages of the policy process' (Howlett, 2011: 22), it makes sense to examine the ACEA agreement using such a framework. The stagist model provides an organising framework for the empirical chapters of this thesis, as illustrated in Figure 1.2.

A stagist model can be applied to governance processes beyond the narrow realm of government, as suggested by Pierre and Peters (2005: 14-16). Similarly, De Clercq and Suck (2002) suggest a stagist model for analysing voluntary agreements. This framework is based on the sequential stages of the policy cycle (ibid., pp. 42-44). Although these stages overlap, four distinctive phases can be discerned. In the initiation stage, the policy objective is defined, and the preferred instruments are chosen. Initiation can be the result of various factors, including 'the discovery of new

information about a particular environmental problem (or of the possible solutions); a coalescence of interests of certain actors in the policy process; or external forces' (De Clercq and Suck, 2002: 42). Following initiation, policy instruments are formulated and designed. In the case of voluntary agreements, 'this stage represents the negotiations that take place between the parties regarding the detailed provisions of the agreement' (ibid., p. 44; see also Cunningham and Clinch, 2004: 35-36). This stage determines which public and private resources will be mobilised to achieve the agreed policy goal (Pierre and Peters, 2005: 15). In the implementation stage, policy instruments are put into practice. Since the implementation of voluntary agreements depends on private actors, 'this can also be a point at which there is substantial loss of control over policies' (Pierre and Peters, 2005: 15). De Clercq and Suck (2002: 44) term the final stage of the policy cycle 'operation'. In this stage, the operation of a policy instrument is evaluated, and the instrument is either revised or replaced. This stage is referred to in this thesis as reformulation. These stages of a voluntary agreement are discussed in more detail below.

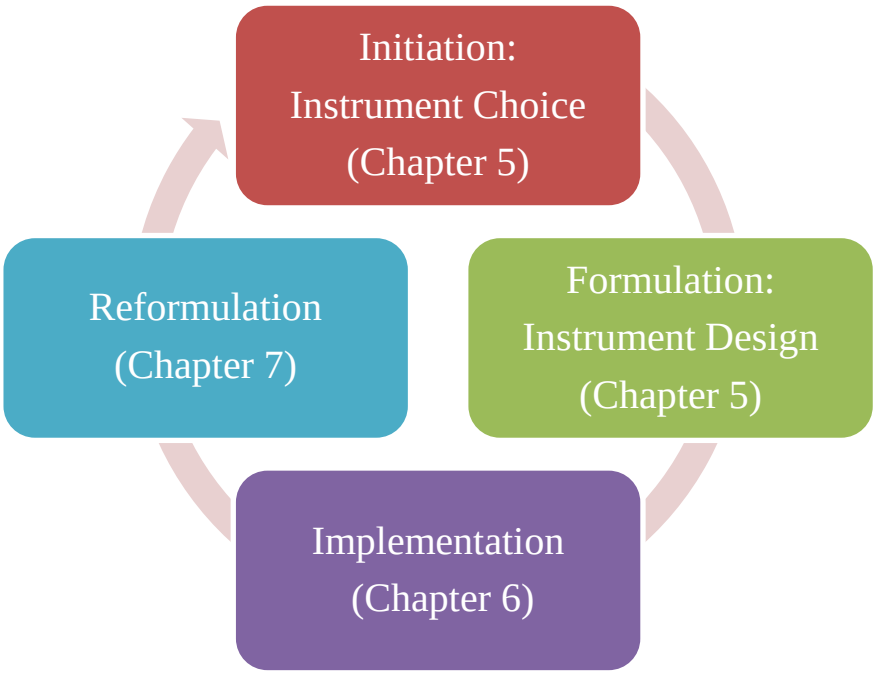

Figure 1.2: A stagist model of voluntary agreements

Source: Based on De Clercq and Suck (2002: 15)

Policy Initiation: Choosing Voluntary Agreements

The literature on voluntary agreements has extensively explored the motivation of various policy actors in choosing voluntary policy instruments (e.g. Delmas and Terlaak, 2001; Koehler, 2007). The involvement of both firms and regulators in policymaking is said to promise potential benefits 'through the use of flexible, cost-saving strategies that are aligned with the firms' competitive objectives as well as the regulators' mandate to protect the environment' (Delmas and Terlaak, 2001: 47). For industry, voluntary agreements are said to reduce compliance costs with environmental policy, promote innovation, stimulate 'green' consumer demand and financial investment, and increase their influence over policymaking whilst delaying mandatory legislation (Lyon and Maxwell, 2007: 734-735). Thus, voluntary agreements are often 'used by industry as a public relations tool, intended to appease critics in government and consumer circles alike' (Koehler, 2007: 711-712). Regulators are also said to benefit from the choice of voluntary agreements through reducing time and costs associated with policymaking, correcting information asymmetries, and securing political acceptability (Gouldson and Murphy, 1998: 58).

Voluntary agreements also have some potential disadvantages for both parties, including delaying legislation, promoting regulatory capture, increasing implementation and compliance costs, and encouraging free-riding (e.g. Gouldson and Murphy, 1998: 58-9). Voluntary agreements are further said to encourage the participation of private policy actors in policymaking. However, environmental NGOs are often critical of these, as they lead to 'watering down of environmental protection standards' (Cunningham and Clinch, 2004: 31), promote 'business as usual' scenarios, and do not ensure the participation of third parties (Bomberg, 2007: 253). Voluntary agreements thus hold possible risks and rewards for policymakers, industry and third parties (ten Brink, 2002: 32-36), as summarised in Table 1.2. In particular, business groups are more likely to benefit from these arrangements, while third parties risk being excluded from the policymaking process. Therefore, when examining the choice of a voluntary agreement, it important to examine why this instrument was chosen over other policy instruments, which policy actors were involved in this choice, and which actors opposed it. The analysis of the policy choice stage should therefore clarify 'the real strength of

all parties that could potentially be involved in the formulation of a voluntary approach' (Cunningham and Clinch, 2004: 35).

Policy Actor	Possible Advantages	Possible Disadvantages
Industry	• Influence over policymaking • Deterring mandatory legislation • Flexibility in compliance • Reducing compliance costs and time • Enhancement of image and reputation • Cost-effectiveness	• Higher costs • Reducing information asymmetries • Loss of competitive advantage • Free-riding
Public Authorities	• Correction of information asymmetry • Cutting time and cost of policymaking • Encourage industry proactiveness • Political acceptability	• Risk of regulatory capture • Monitoring costs • Restriction of governmental freedom • Danger of excessive bureaucracy
Third Parties	• Increased influence over industry behaviour	• More difficult and costly to participate and monitor • Possible lack of transparency
General	• Consensus-building and partnership • Quicker implementation • Promote Innovation • Integration of environmental and economic concerns	• Postponing legislation • Business-as-usual outcomes • Uncertainty of results

Table 1.2: Possible advantages and disadvantages of voluntary agreements

Source: adapted from De Clercq and Suck (2002: 12-13)

Design and Implementation of Voluntary Agreements

The literature on the design and implementation of voluntary agreements often addresses similar issues, and is therefore discussed jointly here. Much has been written about the design and implementation of voluntary agreements (Cunningham and Clinch, 2004; EEA, 1997; Higley and Lévêque, 2001; OECD, 1999; and ten Brink, 2002, to name a few). The design of a voluntary agreement is said to affect its implementation and the representation of different actors in the agreement, and is therefore 'the substance of the negotiation process' (Cunningham and Clinch, 2004: 36). The technical knowledge on the design and implementation of voluntary agreements is

substantial, and has resulted in a list of best-practice guidelines for the adoption of voluntary agreements, as summarised in Table 1.3. However, the existing literature does not account for how negotiations among public and private policy actors shape the design, and hence the implementation, of voluntary agreements. This thesis therefore seeks to examine *how* these processes are shaped by the dynamic relations among various policy actors. It is argued that by comparing the design of a specific voluntary agreement to the 'ideal type' guidelines, insights can be gained into how the balance of powers among competing policy actors shaped both the design and the implementation of voluntary agreements. This comparison will be made in Chapter 9.

Design and Implementation	
Targets	✓ Well-defined ✓ Ambitious goals ✓ Cost-effective ✓ Promotes innovation ✓ Ensures competitiveness unhampered ✓ Deters free-riding ✓ Ensures technical measures exist to meet targets
Sanctions	✓ Credible regulatory threat ✓ Financial disincentives for non-compliance
Monitoring	✓ Establishes a baseline business-as-usual scenario ✓ Reliable and credible monitoring
Participation	✓ Information provision ✓ Transparency ✓ Participation of third parties

Table 1.3: Criteria for successful design and implementation of voluntary agreements

Sources: Adapted from Cunningham and Clinch (2004: 33); OECD (1999: 12; 134-135)

Reformulation

In order to decide whether to retain or terminate a voluntary agreement, there is a need to evaluate its performance, as suggested in the literature from international agencies (e.g. EEA, 1997; OECD, 1999). Indeed, a significant proportion of the literature on voluntary agreements is concerned with their evaluation (inter alia Alberini and Segreson, 2002; Carraro and Lévêque, 1999; De Clercq and Suck, 2002; Delmas and Terlaak, 2001; Lefèvre, 2000; OECD, 2003). The common criteria for evaluation outlined in this literature are environmental effectiveness, economic (static) and

innovation (dynamic) efficiency, legitimacy, and transparency (Alberini and Segreson, 2002: 159), as summarised in Box 1.1.

Evaluation criteria for voluntary agreements

- Environmental effectiveness
- Economic (static) efficiency
- Dynamic (innovation) efficiency
- Transparency and legitimacy
- Information-diffusion

Box 1.1: Evaluation criteria for voluntary agreements

Source: Alberini and Segreson (2002: 159)

Environmental effectiveness refers to the impact of an agreement on the environmental objective it set out to achieve (De Clercq and Suck, 2002: 55). In the case of the ACEA agreement, this would be whether the agreement resulted in overall reductions in CO_2 emissions from cars. Economic efficiency refers to the 'achievement of a given environmental improvement at least cost' (Carraro and Lévêque, 1999: 8). This is often the defining rationale in the choice of voluntary agreements over other policy instruments (Alberini and Segreson, 2002: 173). Dynamic efficiency refers to the stimulation of innovation, which voluntary agreements are purported to encourage (Carraro and Lévêque, 1999: 8). In terms of legitimacy and transparency, some empirical evidence suggests that voluntary agreements exclude both legislatures and NGOs from policymaking, while strengthening the connections between regulatory agencies and industry groups (Paton, 2002: 45). Thus, in practice voluntary agreements do not necessarily secure a multi-stakeholder dialogue, but might serve to promote close connections between regulators and economic actors (Volpi and Singer, 2002: 148). This thesis does not aim to provide an evaluation of the ACEA agreement *per se*, a matter already addressed by several other scholars (inter alia Bongardt and Kebeck, 2006; Keay-Bright, 2000; Volpi and Singer, 2002). Instead, it seeks to examine how continuous processes of contestation and compromise among various policy actors shaped the different stages of the voluntary agreement, including its reformulation. By doing so, some insights can be gained into the effectiveness, efficiency and legitimacy of the agreement.

In summary, the vast literature on voluntary agreements has explored in detail the reasons for their uptake, best practice for their design and implementation, and their evaluation. From a survey of this literature, it is evident that voluntary agreements hold many possible advantages for economic interest groups, whilst potentially excluding various other policy actors from the policymaking process. In effect, these instruments have a potentially significant impact on the relations between those governing and those governed. However, the literature on voluntary agreements does not address these issues, but rather takes the relations of power that shape and are shaped by voluntary agreements for granted. In order to better explain the *who*, *how* and *why* questions of voluntary agreements, this thesis employs a neo-Gramscian political economy perspective, introduced below.

A Neo-Gramscian Political Economy Perspective: An Introduction

Political economy approaches, it has been claimed, can shed light on processes of governance (Pierre, 2000: 245). Or, as put by Hay (2006: 58), these theories 'offer a series of powerful and probing insights into the complex and dynamic relationship between state, economy and society in capitalist democracies'. This section provides a brief overview of the theoretical framework developed in Chapter 3, and draws a preliminary account of how this framework can be applied to understanding EU car CO_2 emissions governance.

A neo-Gramscian perspective has its roots in Marxist political economy. Antonio Gramsci (1891-1937) was the leader of the Italian Communist party and a pioneer of Marxist political theory (Hobsbawm, 1982: 21). Gramsci followed the Marxist focus on the centrality of economic interest groups (the capitalist class) in shaping societal processes (Marsh, 2002: 154; Weingast and Wittman, 2006: 3). Marxist-inspired political economy accounts allow us to 'emphasise the way in which capital accumulation requires the success of particular industries [...] and the way in which the state is structurally impelled to intervene to promote the pursuit of continued accumulation and thus to promote key industries' (Paterson, 2007: 103). However,

Marxist-inspired accounts of environmental governance have often 'sought to address the questions of capitalism's (in)compatibility with the achievement of sustainability, without exploring in detail the governance mechanisms which seek to manage this relationship' (Newell, 2008: 512). In contrast, neo-Gramscian perspectives 'seek to go beyond some of the more reductionist elements of structural accounts to look at ways in which coalitions are formed between state, capital and civil society' (Newell, 2008: 516). Thus, a neo-Gramscian perspective offers a possible framework for exploring these governance processes. To this end, four neo-Gramscian concepts are explored in this thesis. These are *hegemony*, *historical bloc*, *passive revolution* and *war of position*.

The notion of hegemony is considered to be Gramsci's most important contribution to political thinking (Bieler and Morton, 2001: 20; Levy and Egan, 2003: 805; Levy and Newell, 2005: 49). Hegemony describes a situation in which an economic group establishes its dominance in civil and political society by incorporating its interests with those of other social groups (van Apeldoorn 2002: 30). Rather than relying on coercive control, hegemony 'rests on coalitions and compromises that provide a measure of political and material accommodation with other social groups, and on ideologies that convey a mutuality of interests.' (Levy and Egan, 2003: 805; Levy and Newell, 2005: 49-50). This understanding of hegemony led Gramsci to widen his definition of the state to include both political society and civil society. These categories 'retained a certain analytical usefulness but ceased to correspond to separable entities in reality' (Cox, 1983: 126-7).

Where hegemony is obtained, a historical bloc is formed. A historical bloc is configured of state authority, economic dominance and civil society legitimacy (Levy and Newell, 2005: 50). It is more than the alliance among these groups; it is also 'the specific alignment of material, organizational, and discursive formations that stabilise and reproduce relations of production and meaning.' (Levy and Newell, 2005: 50). The historical bloc evolves through continuous processes of contestation and compromise among social groups. The dominance of a hegemonic group is maintained through the support of civil and political society. However, civil society is also a site of contestation to the hegemonic project.

In order to maintain its dominance in light of challenges from counter-hegemonic groups, the hegemonic group employs a strategy of passive revolution. Here it makes compromises that serve to maintain its dominance over other groups (Davies, 2011: 107). In order to de-stabilise the hegemonic bloc, Gramsci envisioned a war of position by which counter-hegemonic groups could gain influence. Since hegemony is achieved through the consent of civil and political society, these groups needed to gain influence within these realms (Showstack Sassoon, 1982: 113). A neo-Gramscian perspective, it has been argued, can be applied to the study of various social opposition movements, including environmental, feminist and ethnic groups (Levy and Egan, 2003: 810; Levy and Newell, 2005: 57).

A neo-Gramscian perspective suggests a strategic conception of power (Levy and Egan, 2003: 824). This perspective seeks to go beyond a structural definition of power that 'confers the power to decide how things shall be done, the power to shape frameworks within which states relate to each other, relate to people, or relate to corporate enterprises' (Strange, 1994: 25). As Strange notes, it is 'impossible to have political power without the power to purchase, to command production, to mobilize capital. And it is impossible to have economic power without the sanctions of political authority' (Strange, 1994: 25). Therefore, the hegemonic group holds structural power over states (Coen, 2005: 197), both in terms of available resources for lobbying activities, and because it makes decisions about production, employment and investment that shape the political and economic environment in which governments operate. (Newell, 2000: 99-101). Adding to these insights, a neo-Gramscian approach 'provides a perspective that is theoretically grounded, reflects material, discursive, and organizational dimensions of power, and points to the importance of strategy in effecting change within complex social systems' (Levy and Egan, 2003: 824). Thus, it offers a 'strategic notion of power which suggests how actors can gain at least partial comprehension of and influence over complex social and political systems' (ibid.). Power, in this view, is 'mediated, channelled, mobilized and institutionalized through political and civil society' (Gill, 2003b: xi).

Neo-Gramscian accounts have to date not been applied to studies on EU environmental governance. However, a small number of contributions have explored EU governance (inter alia Cafruny and Ryner, 2003b; Cox, 1993; van Apeldoorn, 2002), and environmental governance (including Levy and Egan, 1998; 2003; Levy and Newell, 2002; 2005). These contributions often describe a neo-liberal transnational hegemony that prevailed since the 1980s, and promoted the power of economic actors. In the neo-Gramscian view, the rising popularity of NEPIs can be seen as a symptom of neo-liberal environmentalism, by which the 'ideologies and forms which environmental governance assumes inevitably bear the characteristics of the neoliberal economy of which they are part' (Newell, 2008: 522). Environmental governance is thus increasingly guided by an imperative 'to enable private actors to pursue their economic interests in ways which simultaneously promote sustainability' (Paterson, 2009: 107). Similarly, ecological modernisation can be understood as 'a free market approach to solving environmental problems' (Murphy, 2000: 1). Or, as put by Dryzek (2005: 143), ecological modernisation 'addresses the restructuring of the capitalist political economy along more environmentally defensible lines'. Hence, the popularity of NEPIs reflects changing relations among economic, political and social actors (Newell, 2008: 518). This thesis sets to examine whether a neo-Gramscian perspective can explain these changing relations.

Specifically, this thesis examines the possible contribution of a neo-Gramscian perspective to explaining the changing power relations that shaped EU car CO_2 governance, as seen through the policy cycle of the ACEA agreement. The neo-Gramscian framework presented in Chapter 3 begins with the assumption that the car enjoyed a hegemonic position in European society. Its dominance was secured through the economic power of the car industry, social salience, and wide-ranging political support. The convergence of economic, social and political interests resulted in the establishment of a historical bloc governing the car. However, climate change, it is argued, posed a threat to the hegemony of the car, and necessitated the accommodation of environmental concerns. Contradictions can therefore be observed between the need to promote economic competitiveness and ensure environmental protection. This thesis sets out to examine how these contradictions were addressed by various policy actors in

the historical bloc, and through the alignment of material, organisational and discursive practices. Specifically, it examines how interactions among the EU institutions, Member States, the car industry and environmental NGOs resulted in developments in the historical bloc governing the car. This endeavour is achieved by pursuing the aims and objectives of this thesis, as outlined in the following section.

Aims and Objectives

This thesis aims to explore the possible contribution of a neo-Gramscian political economy perspective to understanding the entire policy cycle of the ACEA agreement.

In order to achieve this aim, the thesis pursues five inter-linked objectives, namely:

1. To outline some prevailing trends in EU transport and car governance.
2. To construct a neo-Gramscian theoretical framework in order to explain the governance of car CO_2 emissions in the EU.
3. To empirically document the various stages of the policy cycle of the voluntary agreement.
4. To examine the power relations that shaped the full policy cycle of the ACEA agreement using the neo-Gramscian framework, including the dynamics between economic, political and environmental actors in this policy arena.
5. To assess the usefulness of the neo-Gramscian political economy framework in explaining the policy process of the ACEA agreement and EU governance of car CO_2 emissions more broadly.

These aims and objectives are addressed throughout the remainder of this thesis, the structure of which is outlined below.

Structure of the Thesis

This thesis continues as follows: Chapter 2 introduces some trends in EU transport and car governance. It presents the main economic, political and social actors involved in EU car governance. It then discusses some trends in transport and car policies more generally, before moving to a more detailed account of EU policies on car emissions. The chapter outlines the inherent complexities in reconciling competing economic, environmental and political interests of EU transport governance, and specifically the governance of the car.

Chapter 3 examines how these complexities can be theorised. It begins with a brief summary of existing theories of EU governance, namely network and multi-level governance, and outlines their contribution to explaining the complex interactions between public and private policy actors. It then assesses the contribution of political economy approaches, and identifies a critical neo-Gramscian perspective as a possible contender for explaining these governance processes. The chapter discusses the four neo-Gramscian notions of hegemony, historical bloc, passive revolution and war of position. It then examines their possible application to understanding EU governance, environmental governance and car governance.

Chapter 4 presents the methodological framework of this thesis. It begins with a discussion of a neo-Gramscian research philosophy. It then justifies the use of a qualitative, single case study research design as the most appropriate method for pursuing the aim and objectives of this thesis. The data collection of documentary evidence through the internet is explained, and criteria for assessing the quality of documentary evidence outlined. The analysis of data through the process-tracing method is then discussed, and the questions informing the empirical and theoretical analyses of this thesis presented. The chapter concludes by examining some criteria for the evaluation of qualitative research and applying them to this thesis.

Chapters 5 to 7 constitute the empirical heart of this thesis. Chapter 5 examines the choice and design of the ACEA agreement between 1991 and 1998. The chapter examines how these processes were shaped by continuous contestation and compromise

among actors with competing economic, environmental and political interests. Chapter 6 then examines the implementation of the ACEA agreement, and outlines the competing interests that shaped this process. Chapter 7 examines the reformulation of the agreement, a process which began in late 2003, and culminated in the adoption of mandatory legislation in 2009.

Chapter 8 provides a neo-Gramscian analysis of the ACEA agreement. It examines the different stages of the agreement, as detailed in the empirical chapters, using the neo-Gramscian concepts developed in Chapter 3. It illustrates that these concepts can fruitfully explain the processes of contestation and compromise that shaped EU car CO_2 governance. The chapter then suggests possible avenues for the development of this theory in order to provide a more comprehensive, multi-level neo-Gramscian account.

Chapter 9 concludes the thesis by reflecting on how far the aims and objectives of the thesis were met. It then examines the main empirical, theoretical and analytical contributions of this thesis to existing knowledge. The chapter applies the neo-Gramscian framework to assess its contribution to the literature on voluntary agreements, and NEPIs and policy instruments more broadly. It is argued that this framework provides some useful insights into the complexities of governing through instruments. The chapter then critically evaluates the neo-Gramscian framework, before suggesting some possible avenues for future research. These include empirical, theoretical and normative opportunities for developing and enhancing the findings of this thesis.

Chapter 2
European Union Transport and Car Governance: An Overview

Introduction

European transport, the 2011 Transport White Paper claimed, 'is at a cross roads. Old challenges remain but new have come' (CEC, 2011b Article 1.3). In particular, the EU is struggling to reconcile the ever-increasing demand for freedom of movement of goods and people – and thus continued economic growth – with the unsustainable nature of the European transport system. Road transport in general and car-use in particular are central to these social, economic and environmental contradictions, as this chapter illustrates.

The chapter continues by introducing some of the main actors involved in EU car governance. It explores the characteristics of the car and oil industries, environmental and consumer groups, and Member States in shaping EU car governance. It then outlines the role of the EU institutions in shaping EU car governance. Following this, the chapter turns to examining the common transport policy and its effect on car governance. In particular, the unsustainable nature of the European transport system and the EU's attempts to promote sustainable mobility are noted. The chapter then turns to examine in more detail some general trends in EU car governance. It discusses the liberalisation of the car market in the 1980s and 1990s, the partnerships that subsequently developed between EU policymakers and carmakers, and the interdependencies of these actors, as seen through the economic crisis which began in 2008. The chapter then examines in more detail EU policies on car emissions. It notes the increasing conflicts between environmental protection and economic growth, and examines how these contradictions shaped EU policies on car emissions. The chapter concludes with the observation that EU transport governance in general and the (environmental) governance of the car in particular were shaped through contradictions, conflicts and compromises amongst economic, social, political and environmental interests.

EU Transport and Car Governance: Private Actors and Member States

The governance of the car in the EU was shaped by a multitude of actors whose interests were often conflicting and changed over time. This section introduces some of the main actors involved in EU car governance. In so doing, the complex process of EU car governance can begin to be unravelled. Some of the main characteristics of the car and oil industries, EU Member States, environmental NGOs, and consumer groups are introduced below.

The European Car Industry

The car industry is an important pillar of the international and European economy (Rhys, 2004: 877). The car industry 'dominates international manufacturing', and carmakers are amongst the world's largest businesses by sales (Mikler, 2007: 1). If car manufacturing were treated as a country, in 2005 it would have been the 6th largest country in the world, with a turnover of €2 trillion (Wells, 2010: 2). The EU is the largest car market in the world (Rhys, 2004: 877). In 2007, the car industry directly employed over 2.3 million people across the EU, and supported 12.3 million European jobs (ACEA, 2011a). The industry is 'an engine for employment, growth and innovation in Europe' (Heneric and Sofka, 2005: 1). However, the profitability of the car industry declined since the 1990s. Demand in key European, U.S and Japanese markets decreased, while supply steadily increased, resulting in over-capacity of production. The industry became a 'high cost/low margin business' (McLaughlin and Maloney, 1999: 2), operating on narrow profit margins (Nieuwenhuis and Wells, 2003: 4). Nonetheless, the car industry maintained its 'relative importance in the EU economy' (Rhys, 2004: 878).

European car companies have over the past few decades experienced some significant changes (as discussed in detail later in this chapter). Once seen as 'national champions' enjoying a great deal of state support, the car industry has since the 1980s been privatised, opened to foreign direct investment, and experienced mergers and alliance-building with European and international companies (Ross, 1998: 108). The car industry became a prominent example of the transnational operation of multinational corporations, with production and distribution increasingly globalised (Mikler, 2003: 7).

Notwithstanding, the production, investment and turnover of carmakers are still largely concentrated in their home countries (Mikler, 2009: 17). The European car market is dominated by a small number of carmakers (Holmes and McGowan, 1997: 160; Rhys, 2004: 882), as illustrated in Table 2.1. The majority of these manufacturers are EU-based, with the presence of a few EU subsidiaries of international companies, such as GM and Ford Europe. Other international carmakers, and notably Japanese and Korean manufacturers, account for a relatively small proportion of cars registered in the EU in 2010. Thus, the European car market is dominated by European carmakers.

Car Company	Market Share (%)	Country of Origin	Associated Brands
Volkswagen	21.3	Germany	Audi, Seat, Skoda, Volkswagen
PSA	13.4	France	Citroen, Peugeot
Renault	10.2	France	Dacia, Renault
Ford Europe	9.8	Germany (U.S.)	Ford, Mercury, Volvo
General Motors Europe	8.8	Germany (U.S)	Chevrolet, Opel, Saab
Japanese Carmakers	8.3	Japan	Daihatsu, Honda, Mazda, Mitsubishi, Nissan Subaru, Suzuki
Fiat	7.6	Italy	Alfa Romeo, Fiat, IVECO, Lancia
BMW	5.3	Germany	BMW, Mini
Daimler	4.8	Germany	Mercedes, Smart
Korean Carmakers	4.5	Korea	Hyundai, Kia
Toyota	4.4	Japan	Toyota, Lexus

Table 2.1: EU registration of new passenger cars in 2010 according to carmaker

Source: ACEA, 2011d

European carmakers are represented through national and EU-wide industry associations. Until 1991, the Committee of Common Market Automobile Constructors (CCMC) represented European carmakers, while the Comité de Liason de la Construction Automobile des Pays des Communautés Européennes (CLCA) represented national car industry associations (Wurzel, 2002: 106-107). These associations were

replaced in 1991, following disagreement among European carmakers, with the Association of European Car Manufacturers (ACEA) (McLaughlin and Maloney, 1999: 121-125). ACEA was established in order to better represent the common interests of the European car industry in light of increasing regulatory pressure at the EU-level (McLaughlin and Jordan, 1993: 139; Rosegger, 1996: 700). It represents European carmakers at the EU-level, and is also allied with national industry associations including the Society of Motor Manufacturers and Traders (SMMT) in the UK, and the German Association of the Automotive Industry (Verband der Automobilindustrie, VDA).

ACEA consists of 15 European vehicle manufacturers. Its headquarters are based in Brussels. Its Board of Directors is composed of the Chief Executive Officers (CEOs) of the companies it represents, with annually-changing presidency (ACEA, 2009a). The main objective of the association is

> [T]o ensure effective communication and negotiation with legislative, commercial, technical, consumer, environmental and other allied interests. The members of ACEA are competitors in the automobile market place and support free and fair competition as a trade policy and a legal concept (ACEA, 2009a).

ACEA is mostly concerned with ensuring the competitiveness of its members through the promotion of appropriate policy measures, market access, infrastructure-provision, completion of the internal market, including fiscal harmonisation, reducing over-regulation and promoting innovation (ACEA, 2010c: 9). In addition to industry-wide representation, carmakers also have individual offices in Brussels, specialising in "EU relations", or even called "delegations to the EU". This illustrates the importance carmakers place on ensuring good working relations with the EU institutions, and their potential influence over EU policymaking through company, Member State, and EU-wide levels of representation.

The Oil Industry

The oil industry is responsible for much of the impacts of climate change, and is 'amongst the world's largest economic entities' (Rowland, 2000: 340). In 2010, six of the top ten global Fortune 500 companies were from the oil industry. In comparison, only one car company (Toyota) was among the top ten (Fortune 500, 2011). Road

transport consumes half of the EU's oil supplies, with two main concerns of climate change and energy security arising (May, 2003: 304). There are therefore synergies between the car and oil industries, as car use fuels demand for oil. However, historically the EU car and oil industries have shifted responsibility for environmental protection from one to the other (Boehmer-Christiansen and Weidner, 1995: 10), as discussed later in this chapter. In 2009, fuel taxes provided over 10% of national tax income in the EU-27 (EUROPIA, 2011: 76). Thus, a structural dependence between oil companies and political society can be noted.

The European oil industry is represented by the European Petroleum Industry Association (EUROPIA). EUROPIA was founded in 1989, and consists of 27 companies. One of its main objectives is to 'be an influential contributor to the key policy and legislative issues at all stages of their development' (EUROPIA, 2011: 5). These policies include the Auto-Oil programme, air quality, acidification and climate change (McCormick, 2001: 113). Environmental issues are also addressed by the Oil Companies European Organisation for Environmental and Health Protection (CONCAWE) which is attached to EUROPIA (Greenwood, 2007: 130). The oil industry is a powerful actor in EU car governance, with great resources, and an interest in maintaining its profitability through the continued consumption of petroleum-based products.

Non-Governmental Organisations

Two main types of NGOs are examined in this thesis, environmental and consumer groups, with an emphasis on the former. For reasons of empirical and theoretical clarity, other civil society organisations, such as driving clubs, are not addressed in this thesis. Environmental NGOs have been increasingly instrumental in shaping EU environmental policy (Bomberg, 2007; Mazey and Richardson, 2005), operating at all stages of the policy process (Greenwood, 2007: 134). The first EU-based environmental NGO, the European Environment Bureau (EEB), was established in 1974. It was later joined by a growing number of NGOs (Knill and Liefferink, 2007: 71). Within the 'group of ten' (G-10) EU-based NGOs, the European Federation for Transport and Environment (T&E) is the principal organisation concerned with transport-related

matters, although other organisations also cooperate on these issues (Greenwood, 2007: 132). Established in 1990, T&E campaigns on sustainable transport issues such as clean vehicles and fuels, road charges and aviation. Although T&E is a Brussels-based organisation, it also represents over 50 national environmental groups (T&E, 2011a). Like most EU-based environmental NGOs, T&E enjoys financial support from the Commission, which began funding environmental groups in order to improve the acceptability and legitimacy of its environmental operations (Lenschow, 2005: 318). However, the support of the Commission means that environmental NGOs can become 'tamed by the Commission' (Greenwood, 2007: 137; see also Taminiau, 2001: 112). Further, the resources available to environmental NGOs are much smaller in comparison to those available to the industry groups presented above (Mazey and Richardson, 2005: 112-113).

Consumer groups are the other set of NGOs examined in this thesis. While numerous EU-wide confederations of consumer groups exist, two prominent organisations can be discerned, the European Consumers' Organisation (BEUC) and the European Association for the Coordination of Consumer Representation in Standardisation (ANEC) (Greenwood, 2007: 142). The BEUC was one of the first EU-based lobbying organisations, established in 1962 (BEUC, 2011). It aims to promote a sustainable consumer policy so that 'only safe products and services, which do not put at risk our health, future generations or the environment, should be available on the EU market' (ibid.). From this statement it can be seen that consumer groups 'have borrowed the discourse of environmental groups' (Greenwood, 2003: 200-201). However, since they represent a wide range of interests, consumer groups have built alliances with both environmental and business groups (Greenwood, 2003: 200-201).

Member States

For the purpose of this thesis, a distinction is made between Member States with and without domestic car industries, and between so called environmental "leader" and "laggard" states (e.g. Lenschow, 2005: 309). Member States with car industries initially included the UK, Germany, Italy and France. With successive enlargements, and the increasingly transboundary nature of car production, the number of car-producing

Member States rose. To date, there are nearly twenty car-producing Member States including Sweden, the Netherlands, Belgium, Spain, Poland and Slovenia (Rhys, 2004: 884-886). However, car production is still concentrated in a small number of Member States led by Germany, as illustrated in Figure 2.1. A crude distinction can also be made between Member States whose carmakers produce larger (and hence more polluting) cars, in particular Germany and Sweden, and Member States whose car industries produce smaller cars, such as Italy and France. Conversely, Germany, alongside other North-European Member States such as Denmark and the Netherlands, is also considered to be an environmental-leader state, often advocating stricter environmental protection measures (Wurzel, 2002: 99-100). However, as this chapter and this thesis more broadly aim to illustrate, calls for environmental protection were often used in order to promote the competitive advantage of national carmakers.

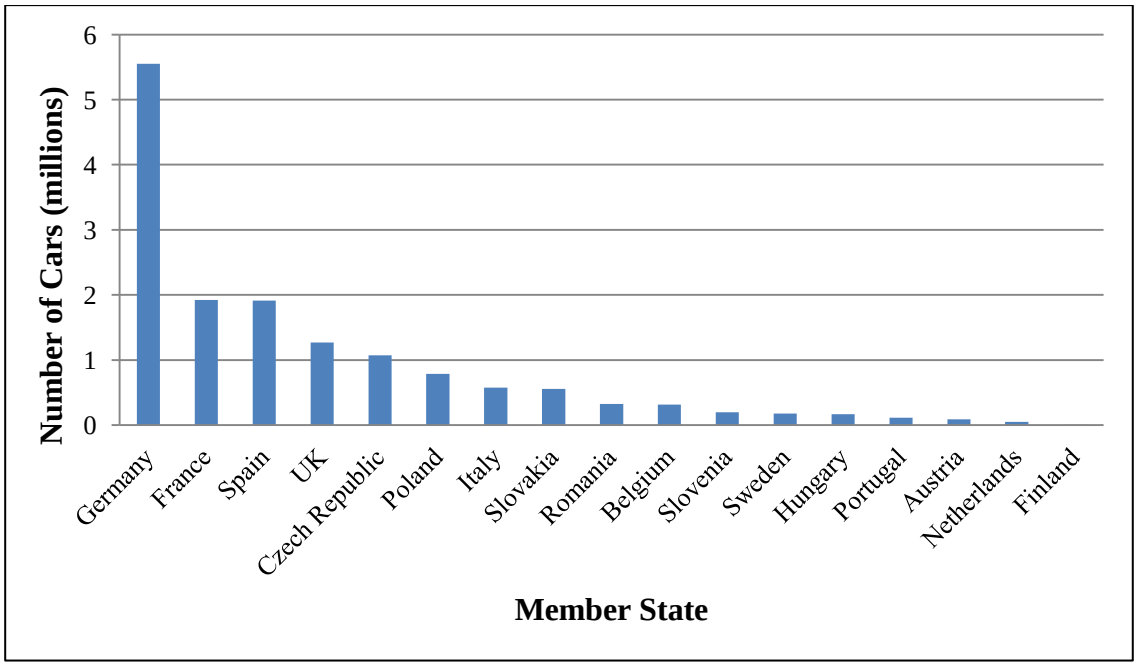

Figure 2.1: Number of cars produced in the EU-27 according to Member State (2010)

Source: ACEA (2011b: 27)

Modes of governing the car industry also varied from country to country. For example, Italy and France traditionally favoured a more interventionist approach to car governance, in order to protect their domestic car industry (Renault in France and Fiat in Italy), while the UK employed a more liberal, market-oriented approach (Holmes and McGowan, 1997: 161-2). Over time, Member States converged towards a neo-liberal approach to car governance (Stevens, 2004: 23-24). State ownership of car companies was reduced, domestic and European markets were opened to international competition and the car industry became largely privatised, as discussed later in this chapter. The interactions among the actors presented in this section increasingly take place within the workings of the EU institutions, as discussed in the following section.

Policy-Making in the European Union Institutions

In order to explain the 'puzzle' of EU car governance, it is necessary to understand the nature of the EU institutions and their workings. These institutions provide the structure within which different public and private actors operate, and provide multiple access points to influence EU policymaking (Eising, 2007: 387). This section therefore briefly introduces the Council of Ministers, the European Commission and Parliament, and the European Court of Justice, in order to better understand their role in shaping EU car governance. However, it is important to note here that 'the formal outline of the policy process says little about the informal realities' (McCormick, 2001: 95), as compromises between competing interest groups are often made informally. Therefore, while this section offers insights into some characteristics of the EU policymaking process, more specific details of informal interactions will be investigated in the empirical chapters of this thesis.

The Council of Ministers

The Council of Ministers acts as both executive and legislature of EU policy (Hayes-Renshaw and Wallace, 1996: 4). As executive, it decides upon the long-term policy goals of the EU through treaties and reforms and sets the medium-term policy agenda (Hix, 1999: 25), sharing agenda-setting responsibilities with the European Commission

(Hayes-Renshaw and Wallace, 1997: 4). As legislature, it increasingly shares competence with the European Parliament, and must approve most policy proposals prepared by the Commission in co-decision with the European Parliament[1]. The Council is comprised of Member States' ministers in specific policy fields. It is fragmented into sectoral interests with little coordination between the Councils (Lenschow, 2005: 313). While most transport issues are decided in the Transport Council (Stevens, 2004: 74), decisions on car emissions are made in the Environment Council (Sbragia, 2000: 300). This thesis is therefore largely concerned with the workings of the Environment Council, unless otherwise specified. The term 'European Council' refers to the meetings of the heads of state of the EU, and should not be confused with the term 'Council of the European Union' which is used in official EU documents for all Council formation.

The procedure of deciding on a Commission proposal is nonetheless similar. Proposals are initially sent to working groups comprised of middle-ranking national officials and experts; these are often the same experts used by the Commission (Weale et al, 2000: 123). Proposals are then sent to the Committee of Permanent Representatives (COREPER). These two forums aim to build consensus among national interests, so that when proposals reach the relevant Council, compromise has already largely been reached. The Council acts to remove any remaining political barriers and to ratify legislation (Stevens, 2004: 74-77).

Several channels for interest group influence can be identified in the workings of the Council. As the Council is the site of intergovernmental bargaining, interest groups sometimes act through national channels of persuasion (Greenwood, 2007: 28-9). Further, non-state actors also influence the Council through its working groups and the COREPER (Greenwood, 2007: 28-9). In particular, actors who enjoy a close relationship with the state can gain access to EU policymaking through the Council (Bouwen, 2002: 375).

[1] The Co-Decision procedure was first adopted for some policy areas in the Treaty of Maastricht (1992). Under the Treaty of Lisbon (2009) it was enshrined as the 'ordinary decision procedure', applying to most areas of EU policymaking.

The European Commission

The European Commission is involved in all stages of EU policy making (Weale et al, 2000: 87). Its greatest influence is perhaps as an agenda-setter and policy formulator (Lenschow, 2005: 312; Sbragia, 2000: 298). The Commission is responsible for proposing and drafting of EU legislation (McCormick, 2001: 98), often acting upon the requests of the Council and European Parliament (Knill and Liefferink, 2007: 58). It can also withdraw legislative proposals at any stage of the policymaking process (Knill and Liefferink, 2007: 58). The Commission further determines which actors will participate in policy formulation (Taminiau, 2001: 103). The Commission is, however, dependent on the cooperation of Member States (Lenschow, 2005: 312) and the expertise of non-state actors (Eising, 2007: 385; Greenwood, 2007: 30; Taminiau, 2001: 105), in order to improve the legitimacy and effectiveness of EU policies (Mazey and Richardson, 2003: 209). This dependency is mutual, as state and non-state actors seek to gain influence in the Commission in order to promote their interests (Eising, 2007: 386-387). These interdependencies are illustrated in the practice of Commitology, in which committees comprised of various stakeholders, but often national and industry experts, operate throughout the policy cycle (Greenwood, 2007: 34). Although efforts have been made to institutionalise these consultation procedures and make them more inclusive and transparent, business interests are still largely favoured (Coen, 2007: 335).

The Commission's internal structure is fragmented and reflects upon the multitude of interests it represents. It is comprised of numerous Directorate-Generals (DGs), each responsible for a specific policy area (Hix, 1999: 37). In the governance of transport in general, and cars in particular, responsibilities are often shared between DG Transport and Energy, DG Enterprise and Industry, DG Competition, and DG Environment (Stevens, 2004: 72), with DG Environment taking the lead on car emission proposals (Knill and Liefferink, 2007: 59). Each of these DGs represents different, often competing, interests. The DGs also vary in terms of size and influence over EU policymaking, and in their administrative culture (Mazey and Richardson, 2003: 212). Both DG Transport and DG Environment are relatively small in terms of budget and size, and thus hold a weaker position relative to DG Industry (Knill and Liefferink, 2007: 60; Stevens, 2004: 69; Wurzel, 2002: 65). The DG responsible for drafting a

particular EU policy is dependent on the cooperation of other DGs (Sbragia, 2000: 299). Thus, DG Environment is often forced to frame its legislative proposals in terms of promoting economic growth and the prosperity of European industry (Lenschow, 2005: 312). Each policy proposal is considered by the cabinets of the relevant Commissioners, and then passed to the College of Commissioners (Weale et al, 2000: 118). While in theory the College of Commissioners represents the European interest, in practice Commissioners are influenced by their nationality and political affiliation (Greenwood, 2007: 33; Hix, 2006: 146; Wurzel, 2002: 67). The cabinet of each Commissioner, comprised of a number of personally-selected experts, is often targeted by various interest groups (McCormick, 2001: 99). This is another point of access for the private policy actors noted above. The Commission maintained a symbiotic relationship with 'national governments and sectoral interests within and beyond the European Community' (Mazey and Richardson, 2003: 211).

The European Parliament

The only elected body of the EU institutions, the European Parliament, has gained influence in EU policymaking over time (Weale et al, 2000: 92). From its initial advisory role under the consultation procedure (Knill and Liefferink, 2007: 65), the Parliament's power increased under the co-operation procedure agreed under the Single European Act (SEA) (Bache and George, 2006: 242-3). Parliament's power was subsequently strengthened through the co-decision procedure agreed in the Maastricht and Amsterdam Treaties. The Parliament now holds potential veto power over EU legislation (Lenschow, 2005: 315-316). Policy proposals are forwarded from the Commission to the Parliament for amendments, and submitted to the relevant Parliamentary Committees (Weale et al, 2000: 92). In the case of transport, proposals are usually directed to the Committee on Regional Policy, Transport and Tourism (Stevens, 2004: 78). The Committee on the Environment, Public Health and Consumer Protection is responsible for proposals on environmental issues, including car emissions (Sbragia, 2000: 301). The Environment Committee is influential in EU environmental policymaking, and enjoys a close relationship with DG Environment officials (Knill and Liefferink, 2007: 66; Taminiau, 2001: 115; Weale et al, 2000: 92). The opinions of the committees are brought forward for the approval of Parliament. Under the co-decision

procedure (now the ordinary-decision procedure) the agreed position of the Parliament is forwarded to the Council. The Council's proposed amendments are returned to the Parliament for a second reading. In the case of dispute between the two institutions, a conciliatory committee is appointed, and if disagreement prevails, the Parliament can reject the policy proposal (Hix, 2006: 147).

The European Parliament is considered by some as an 'environmental champion' (Burns, 2005). It played an important role in EU car governance (Arp, 2002; Boehmer-Christiansen and Weidner, 1995; Wurzel, 2002), as discussed later in this chapter. As the 'greenest' EU institution, the Parliament has often been lobbied by environmental groups (Lenschow, 2005: 316; Sbragia, 2000: 302). However, with its growing influence over EU policymaking, the Parliament has also experienced a rise in interest group lobbying (Judge and Earnshaw, 2003: 63, Kohler-Koch, 1997: 5). This includes 'massive lobbying from industry' (Gillies, 1998: 182).

The European Court of Justice

The European Court of Justice (ECJ) has been instrumental in shaping EU policy (Nugent and Paterson, 2003: 98). Its importance lies in its responsibility for interpreting EU law and ensuring compliance with it (Knill and Liefferink, 2007: 66). The ECJ can take action against Member States and EU institutions through infringement proceedings, and impose pecuniary sanctions for non-compliance (Lenschow, 2005: 317). The Court has shaped both EU transport policy (Stevens, 2004: 79) and environmental policy (Lenschow, 2005: 317; Weale et al., 2000: 102). In the case of transport policy, Stevens (2004: 80) observed that 'the Court's rulings have tended to favour the liberal market approach'. In contrast, with regards to environmental policy, the court has at times prioritised environmental protection over economic considerations (Knill and Liefferink, 2007: 67). The ECJ is likely to continue playing a significant role in balancing 'demands of environmental protection and the goals of trade liberalisation' (Weale et al., 2000: 128). Interest group involvement in the proceedings of the ECJ is limited (Coen, 2007: 340). In particular, prior to the publication of the 2003 Directive on public participation (European Parliament and Council of the European Union, 2003), NGOs could not establish a 'standing' in EU law (Greenwood, 2007: 39). Both

environmental NGOs (Sbragia, 2000: 302-303) and other interest groups (Greenwood, 2007: 39-40) therefore had difficulties in bringing proceedings to the court. Overall, EU interest groups have used litigation strategies sparingly, 'owing to the high political and economic costs of action, risk aversion of EU interests, and a strong cultural bias towards consultation rather that conflict in lobbying' (Coen, 2007: 340).

This section outlined some of the general characteristics of the EU institutions, and how these shape EU policymaking. It also identified some access points for interest groups to influence EU policymaking. The following section turns to examine some of the complexities inherent in EU transport governance, and the conflicting interests that have shaped the EU's common transport policy.

Transport Governance in the European Union

Transport is an important part of European integration, with measures predating the establishment of the European Economic Community (Nicoll and Salmon, 2001: 215). The common market for transport was envisioned in the Treaty of Rome (1957: Article 3e; see Whitelegg, 1988: 6). The prominence of transport as an EU policy objective is not surprising, as transport is a panacea for ensuring integration through the free movement of goods, people, services and capital (Brömmelstroet and Nowak, 2008: 34). Two phases of EU transport policy can broadly be identified (Stevens, 2004: 47). The first - from the 1950s to the 1980s - was characterised by slow progress on a common transport policy. The second stage - from the 1990s onwards - was characterised by the quest for 'sustainable mobility', aiming to reconcile economic growth, transport demand and environmental protection, as discussed below.

The Common Transport Policy and the Promotion of Road Transport

The first stage of the EU common transport policy - from the 1950s to the 1980s - was characterised by attempts to harmonise Member States' transport regulations, create EU-wide standards and ensure uniform conditions for transport services. In the 1960s, the Commission attempted to introduce an overarching common transport policy. These

attempts were 'blocked at every turn' by Member States, operating through the Council of Ministers (Stevens, 2004: 60). Therefore, in the 1970s and 1980s, the Commission employed a more pragmatic approach, introducing modest mono-modal regulations that were acceptable to the Council (Stevens, 2004: 60).

Member States' opposition to the common transport policy was the result of their competing policy goals and economic interests (Kerwer and Teutsch, 2001: 25). On the one hand, some Member States, such as Germany and France, saw transport as an important part of their national security, cohesion and employment strategies, and therefore preferred an interventionist policy style, including heavy subsidies and public ownership of railways and other modes of transport. On the other hand, some Member States, including the UK and the Netherlands, saw transport as mostly facilitating industry, and therefore promoted liberal, free market approaches (Aspinwall, 1999: 120-3). The need for unanimous agreement in the Council of Ministers impeded progress on the common policy (Aspinwall, 1999: 120; Brömmelstroet and Nowak, 2008: 34; McGowan, 1998: 460).

In the 1980s, the common transport policy gained momentum due to a combination of institutional and political economy factors (Aspinwall, 1999: 119; Kerwer and Teutsch, 2001). Institutionally, in 1983 the European Parliament filed a complaint with the ECJ against the Transport Council for failure to implement a common transport policy (McGowan, 1998: 460). This resulted in an 'inactivity verdict' against the Council in 1985 (Stevens, 2004: 55). In 1987, with the introduction of qualified majority voting and the cooperation procedure under the Single European Act (SEA), agreement in the Council of Ministers became easier to reach (Ross, 1998: 51). In political-economy terms, during the 1980s Member States converged towards a neo-liberal approach, promoting a free transport market (Aspinwall, 1999: 123). The single market programme created further impetus for pursuing the common transport policy, which was a panacea for the free movement of goods and people, and thus economic growth (Aspinwall, 1999: 122-3; McGowan, 1998: 460-1).

While some scholars consider that the common transport policy was largely ineffective until the 1980s (Aspinwall, 1999: 122; Kerwer and Teutsch, 2001: 23;

McGiffen, 2001: 115), others feel that it shaped the uptake of different modes of transport in the EU (e.g. Ross, 1998: 42-3; Whitelegg, 1988: 20-30). In its first decades, the common transport policy facilitated the establishment of road transport as the dominant mode of transport in the EU for both passengers and freight (Whitelegg, 1988: 20-30). This was done initially through efforts to liberalise the transport market by setting restrictions on state support for railways and advocating the removal of barriers on cabotage[2] in both freight and passenger transport. Later this was also evident in the investment in road infrastructure, while failing to price the real costs of road transport, and neglecting other, more sustainable modes of transport (Whitelegg, 1988: 58-60; Abbati, 1986: 52; Ross, 1998: 43). This early transport policy is considered to be one of the factors explaining the increase in car ownership and use in the EU (Banister et al., 2000: 65). By 1990, cars were by far the most popular means of passenger transport in the EU, as illustrated in Figure 2.2. In light of the growing popularity of the car and road transport more generally, the EU then faced new challenges in its common transport policy, as discussed below.

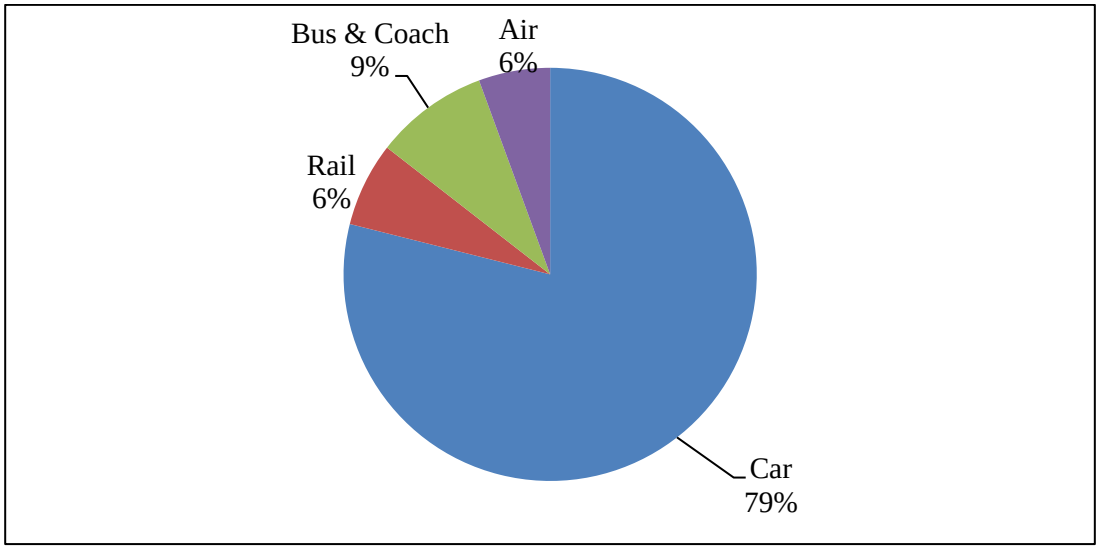

Figure 2.2: Distribution of EU passenger transport according to passenger km per transport mode (1990)

Source: CEC (1992c: 8)

[2] The operation of a transport operator from one Member State in another Member State.

Towards Sustainable Mobility?

In 1992, coinciding with the Rio Earth Summit and the signing of the Treaty of Maastricht, the Commission published a White Paper on the future development of the common transport policy (CEC, 1992c). The Paper acknowledged the unsustainable nature of the EU transport system. It warned that, notwithstanding technological advancements, CO_2 emissions would rise due to the ever-increasing demand for road transport for both passengers and freight (Article 28). Despite these concerns, the Paper stressed the importance of the transport sector in ensuring 'the continued health of the Community's economy' (Article 29). In an attempt to reconcile competing economic, social and environmental demands, the Paper introduced the notion of sustainable mobility (Stevens, 2004: 62). This notion was criticised for being 'a lubricant to the very development it was meant to challenge: The ever increasing movement of people and goods' (Gudmundsson and Höjer, 1996: 269). Despite growing awareness, environmental concerns were not 'fully integrated into the definition of and implementation of the common transport policy' (Stevens, 2004: 62).

The tensions between demands for environmental protection and mobility were evident in several developments in the EU transport policy since 1992, for example, the promotion of Trans-European Transport Networks (TEN-T) set out under the Maastricht Treaty (Stevens, 2004: 179). Already in the 1980s, TEN-Ts were championed by the European Round Table of Industrialists (ERT), including several car and oil companies, as a means of promoting the competitiveness and economic growth of European industries (Brömmelstroet and Nowak 2008: 41). In 1994, fourteen infrastructure projects were included in the programme (Stevens, 2004: 174). To date, there are thirty priority projects to develop road, rail, air and water, as well as intermodal transport networks (European Parliament and Council of the European Union, 2010). While the TEN-T programme endorsed the uptake of more environmentally-friendly modes of transport (Banister 2000: 62; McGiffen, 2001: 119; Stevens, 2004: 62), it was seen as promoting economic and transport growth and thus exacerbating environmental degradation (van der Heijden, 2006: 24). Investment in road-building still accounts for a significant proportion of the EU's expenditure on transport infrastructures (EEA, 2002: 37). Thus, a contradiction between economic

growth, mobility and environmental protection can be observed. This contradiction attracted criticism from several scholars (including, Aspinwall, 1999: 129; Banister et al., 2000: 68; McGiffen, 2001: 117; McGowan, 1998: 461).

Since 1992, the Commission addressed the unsustainable nature of the EU transport system in numerous policy documents. In 1998, the Commission published a Communication on transport and CO_2 emissions, acknowledging that a shift towards a more sustainable transport system would require overcoming 'vested interests and rigidities' (CEC, 1998f: 4). In 2001, the Commission published a sustainable development strategy that called for the decoupling of transport from economic growth and for a shift away from road transport to more sustainable modes of transport (CEC, 2001a: Article 3). The transport White Paper published later that year similarly called for a shift in 'the historical imbalance in favour of road' towards more sustainable modes of transport (CEC, 2001e: Article 4). This was to be achieved through pricing of road transport and investment in alternative transport modes. The review of the White Paper published in 2006, confirmed that 'the efforts to achieve the goals of meeting growing mobility needs and strict environmental standards are beginning to show signs of friction' (CEC, 2006c: Article 2.2). The review called for a 'holistic approach' to transport policy, combining action at different spatial scales and between private and public actors, employing a broad range of policy instruments, and promoting modal integration (p. 21). The review was criticised on environmental grounds, for downplaying the need for demand-side measures, and for overriding the calls for modal shift, replacing them with the concept of 'co-modality' (Stead, 2006: 367).

A White Paper on transport published in 2011 again acknowledged the unsustainable nature of the European transport system (CEC, 2011b: Article 13). The paper emphasised the importance of transport for ensuring economic growth, competitiveness, and social mobility (e.g. Article 1, Article 17). It also stressed the oil-dependence of the European transport system, and the problems this posed in light of diminishing oil supplies from increasingly unstable geo-political regions (Article 5). The paper also addressed the need to reduce transport CO_2 emissions in order to meet the EU's international climate commitments, and limit climate change to below 2ºC.

This, the paper claimed, required the reduction of transport CO_2 emissions by 60% from 1990 levels (about 70% from 2008 levels) by 2050 (Article 6). In order to achieve this objective, the paper outlined an ambitious inter-modal approach. The goals set included halving the number of conventionally-fuelled cars in urban transport by 2030 and phasing them out by 2050; shifting road freight over 300 km to other modes; completing a high-speed European rail network by 2050; ensuring fair pricing and elimination of distorting subsidies; and promoting behavioural change. The Paper can be seen as a leap forward in the EU's transport policy, and as a truly ambitious attempt to make the EU transport system more sustainable. While environmental concerns were important in this context, other considerations, such as growing oil insecurity and promoting economic growth, figured highly in the strategy. However, it remains to be seen whether the EU is on the road towards sustainable mobility, a quest that will require major economic, technological, infrastructure and behavioural adaptation.

In summary, the EU faces some great challenges to its transport policy. While progress on the common transport policy has been made since the 1990s, new challenges have appeared. The ever-growing popularity of road transport resulted in increasing tensions among economic growth, mobility and environmental sustainability. Since 1992, the EU has attempted to resolve these tensions by promoting the notion of sustainable mobility, which aims to reconcile competing economic, social and environmental demands. To date, these attempts have failed, and CO_2 emissions from the transport sector have sharply risen since 1990. Cars in particular play an important role in this trend, as illustrated in Figure 2.3. Their governance in the EU is discussed in some detail below.

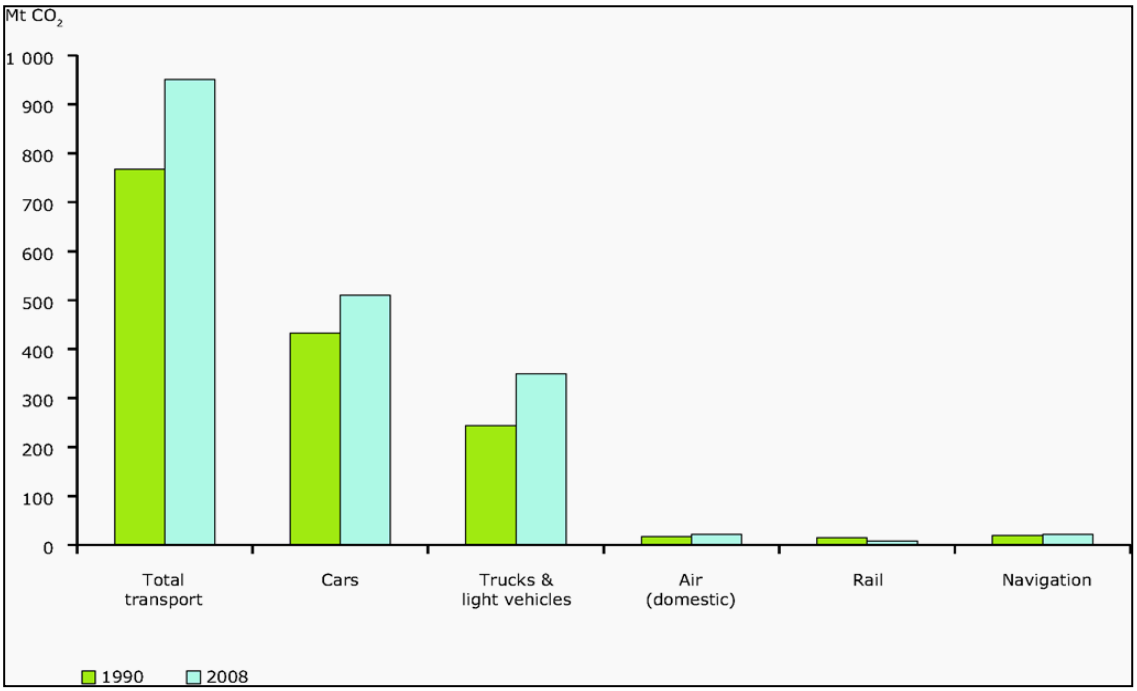

Figure 2.3: EU transport CO_2 emissions according to transport mode (1990-2008)

Source: EEA (2011b)

Car Governance in the European Union

EU car governance has evolved over time, and especially since the 1980s. In particular, the relations between policymakers and carmakers have developed in light of the liberalisation of the car market, and the deepening process of EU integration. This section examines these changing relations in some detail. It continues by discussing the liberalisation of the car market in the 1980s. It then illustrates the close relations that developed between policymakers, and the Commission in particular, and carmakers, as seen in the establishment of the CARS 21 high-level group. The section concludes with the examination of the effects of the 2008 financial crisis on the relations between carmakers and policymakers. It finds that in light of the liberalisation of the car industry and the removal of state intervention, carmakers and the Commission developed close working relations from the 1990s onwards. However, in light of the economic crisis of 2008, the interdependencies between carmakers and both EU and national policymakers

came to the forefront. These insights help unravel some of the complexities inherent in EU car governance, as discussed below.

Liberalising the European Car Industry

The European car industry traditionally enjoyed a great deal of support from Member States. Up until the 1980s, carmakers were 'protected as industrial national champions by governments eager to maintain a manufacturing capacity in automobiles' (Ross, 1998: 108). Ensuring the viability of the car industry was considered to be important for stimulating economic growth, employment and tax revenues. Moreover, the continued economic growth of the car industry served to reproduce the capitalist system (Paterson, 2007: 92) (as discussed in more detail in Chapter 3). As in the case of transport more generally, some Member States, such as the UK, promoted a free-market approach to governing the car, while others, such as France and Italy, preferred more interventionist approaches (Holmes and McGowan, 1997: 160; Ross, 1998: 108). Despite this divergence, all car-producing Member States supported their car industries to some extent through subsidies, bailouts and restrictions on imports (Ross, 1998: 109). A structural interdependence between the car industry and state managers can therefore be noted.

In the 1980s, efforts to liberalise the European car market gained momentum. With the advent of the single-market programme and the rise of neo-liberal ideologies, the Commission pursued the liberalisation of the European car market in order to promote the competitiveness of European carmakers (Holmes and McGowan, 1997: 162-3). The car industry, still heavily protected by state intervention, suffered from economic inefficiency, as seen in the lower productivity and quality of production in the European car industry, in comparison to their U.S. and Japanese counterparts (Mason, 1994: 435). In an effort to improve the efficiency and competiveness of the European car industry, the Commission promoted the internal and external liberalisation of the car market. Internally, it was believed that state aid preserved weak firms and promoted overcapacity in the industry, undermining its long-term competitiveness. Externally, the removal of state barriers on Japanese car imports was similarly seen as a means of enhancing the competitiveness of the European car industry. While these incidences are

reviewed in detail elsewhere, (e.g. Holmes and McGowan, 1997; McLaughlin and Maloney, 1999: 140-158), it suffices to say here that they entailed a process of contestation and compromise among the EU institutions, specifically the Commission's push to liberalise the car market and the Council's pull to protect national interests. Car-producing Member States, notably France and Italy, strived to protect their national car industries, while the car industry 'greeted the coming of the Single Market with considerable apprehension' (Ross, 1998: 109).

The neo-liberal privatisation project, nonetheless, proceeded. From the 1990s, the European car industry underwent 'major structural and organisational changes' (Heneric and Sofka, 2005: 1), and is today characterised by its privatised, transnational nature (Rhys, 2004: 884), as discussed above. However, some Member States, and notably Germany still have a degree of state ownership in car companies. For example, Volkswagen is still partially state-owned (Hey, 2010: 222). Nonetheless, the close relations between Member States and the car industry were, to an extent surpassed by cooperation between the Commissions and carmakers (Holmes and McGowan, 1997: 181). An example of this is the establishment of the CARS 21 high-level group, as discussed below.

The CARS 21 High-Level Group

The attempts to promote the competitiveness of the European car industry faced old and new challenges in the 2000s. A report published by DG Industry in 2004 drew attention to the challenges the European car industry faced in light of weak economic growth and sluggish demand in the European market; the (continued) low productivity of the European car industry in comparison to its Japanese and US counterparts; and the challenges of adopting new innovations, and especially low-carbon technologies (CEC DG Enterprise and Industry, 2004). The competitiveness of the European car industry, the report claimed, was dependent on a 'coherent and cost-effective regulatory framework' (p. 226). In response, Industry Commissioner Günter Verheugen launched in 2005 a high-level group on a Competitive Automotive Regulatory System for the 21st Century (CARS 21). The aim of the group was to provide policy recommendations for

improving the 'worldwide competitiveness' of the European car industry (CEC, 2005c). Its objectives were to

> [M]ake recommendations for the short-, medium-, and long-term public policy and regulatory framework for the European automotive industry that enhances global competitiveness and employment while sustaining further progress in safety and environmental performance at a price affordable to the consumer (CEC DG Enterprise and Industry, 2006: 8).

This quote captured the different pressures the car industry faced from economic, social and environmental perspectives. Economically, the car industry and the EU alike needed to ensure the continued economic viability of the industry and promote its competitiveness, at national, EU-wide and international scales. Environmental and safety consideration needed to be incorporated into this economic agenda, while also ensuring continued consumer demand for car use. Some of the contradictions of the sustainable mobility discourse, discussed above, can therefore be observed. In order to meet these objectives, the group called for better regulation on competition, environment and safety issues. It advocated the use of NEPIs, and especially voluntary agreements (CEC DG Enterprise and Industry, 2006: 20).

The CARS 21 group comprised various public and private policy actors. The Commission's Industry, Transport and Environment Commissioners were joined by Ministers from Germany, France, the UK, the Czech Republic and Italy, two MEPs, five CEOs from the car industry, the presidents of EUROPIA and the European Association of Automobile Suppliers, and one environmental NGOs representative (CEC, 2005c). The group was criticised by environmental NGOs for being un-inclusive (T&E, 2005b). The composition of the group reflected upon the continued political importance of the car industry both nationally and at the EU-level. Moreover, it illuminated the uneven distribution of power among industry and other private policy actors, and especially environmental NGOs and consumer organisations.

The CARS 21 group concluded its first phase in 2006 (as discussed in Chapter 7). It was re-launched in October 2010 due to the difficult economic climate in the EU (as discussed below). The aim of the re-launched group was to advise the Commission on an action plan to promote the competitiveness of the European car industry, whilst

ensuring sustainable mobility and economic growth (CEC, 2010c). The Commission's Vice-President, and Industry Commissioner, Antonio Tajani, stressed the importance of a vital car industry for the EU, "as an *economy* and as a *society*" (CEC, 2010c, emphasis added). This statement illustrated the continued interdependence between social, economic and political actors. The re-launched group was more inclusive of environmental and consumer organisations, with two environmental NGO representatives and one from the BEUC. The economic interests of the car industry still prevailed, in particular in light of the economic recession of 2008.

The 2008 Financial Crisis and its Aftermath

The difficult economic climate and the recession that began in 2008 had an adverse impact on European carmakers, who already struggled with low economic growth. In 2008, the registration of new cars in the EU fell dramatically, as illustrated in Figure 2.4. This figure also demonstrated the close correlation between economic growth and the sale of new cars, as seen in the plummeting number of new registrations in 1993 and 2000, when the EU economy was in recession. The figure shows that the number of newly-registered cars in the EU in 2010 was similar to the number of cars registered in 1991, thus demonstrating the challenges of promoting economic growth and the competitiveness of the European car industry. The car industry, both in the EU and globally, faced serious economic challenges to its operations (Wells, 2010). Problems of falling consumer demand, access to credit and financing and the long-standing structural over-capacity of the industry all contributed to carmakers' diminished profitability (CEC, 2009d: 3-4). The economic downturn of the European car industry had a knock-on effect on supplier industries, and resulted in rising unemployment, and declining revenues not only for the car industry, but also for Member States (CEC, 2009d: 3-4). This illustrated the continued economic importance of the car industry for the EU economy.

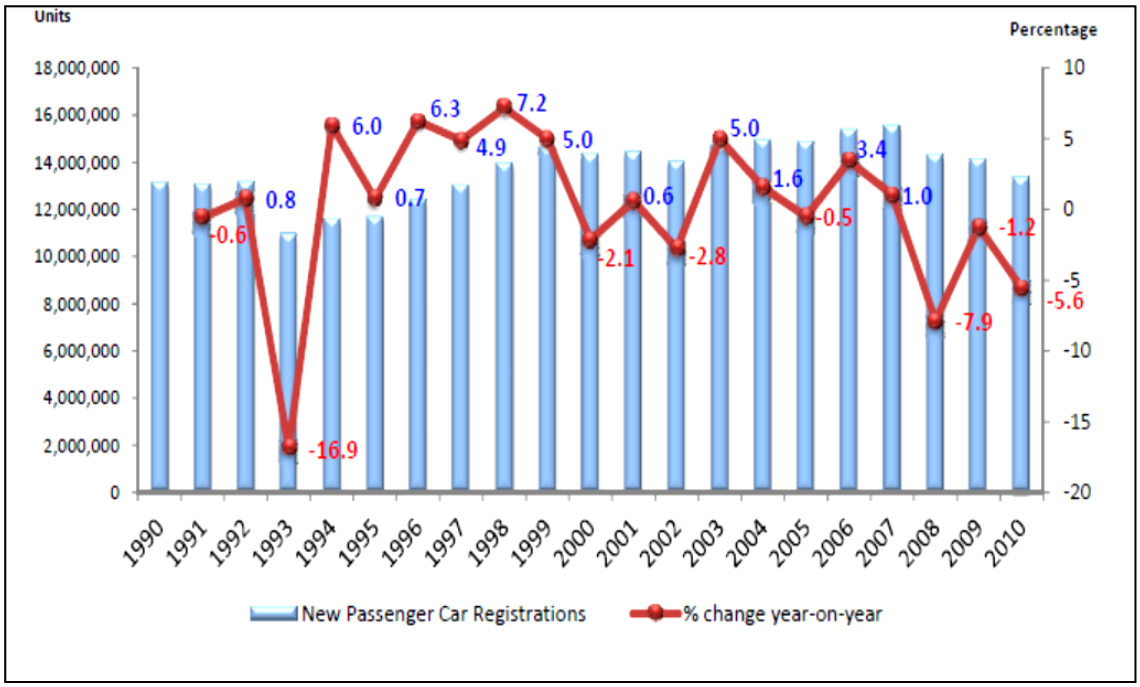

Figure 2.4: Trends in new car registration in the EU (1991-2010)

Source: ACEA (2011b: 13)

In response, both Member States and the EU took action to protect the car industry. In its economic recovery plan published in November 2008, the Commission envisioned a public-private partnership to promote a 'European green cars initiative' in order to stimulate the competitiveness of the European car industry (CEC, 2008a: 16). This included research and development (R&D) into clean technologies and demand-side measures to promote the uptake of cleaner cars. In December 2008, the Commission published a temporary state aid framework to enable Member State support for ailing carmakers (CEC, 2009e). In February 2009, the Commission published a Communication on 'responding to the crisis in the European automotive industry' (CEC, 2009d). The Communication called for strengthening the partnership among carmakers, policy makers and trade unions, through the re-launch of the CARS 21 process, in order to promote the competitiveness of the car industry. It called for continued financial support for R&D in the car industry, while boosting demand, accelerating fleet renewal, and safeguarding employment and productivity. Member States, in turn, employed a variety of schemes to stimulate demand for new cars. These

included scrappage schemes and tax breaks (CEC, 2009d). However, these incentives caused some tension among Member States, notably France and Germany, who feared that aid would distort market competition and further worsen the position of their respective car industries (EurActiv, 2009). Environmental NGOs argued that some of these scrappage schemes had a perverse impact on the environment, by stimulating demand for more polluting cars (T&E, 2009). Tensions between economic and environmental interests on both national and EU scales can therefore be observed, a theme developed throughout this thesis.

In summary, this section discussed some elements of EU car governance. The car industry, traditionally protected by state intervention, was privatised and liberalised in the 1980s and 1990s. Carmakers increasingly enjoyed close cooperation with the EU institutions, and notably the Commission. However, the economic crisis in 2008 demonstrated the continued interdependence among carmakers and both national and EU policymakers. In addition, tensions were noted between the need to promote continued economic growth and environmental protection, as discussed below.

The Governance of Car Emissions

Environmental concerns first emerged on the EU car-governance agenda in the early 1970s. Three stages can be discerned. In the first stage, from 1970 to the early 1980s, regulation was seen as a means of promoting market harmonisation, characterised by un-ambitious standards to reduce the emissions of conventional pollutants, including nitrogen oxides, carbon monoxide and hydrocarbons (Knill and Liefferink, 2007: 122). The second stage, during the 1980s, marked attempts to tighten vehicle emissions regulations due to increasing environmental concerns and economic considerations. The third stage, from the 1990s onwards, saw attempts to apply ‘new’ modes of governance and NEPIs to governing car emissions. This section explores some of the continuities and changes in the regulation of car emissions in the EU from the 1970s to present, and sheds light on the interplay between economic and environmental considerations in shaping these.

1970s: Vehicle Emissions Regulation as a Means of Market Harmonisation

The origin of measures to control EU car emissions in the 1970s can be traced to attempts to 'facilitate and enhance European trade by means of technical harmonization' (Knill and Liefferink, 2007: 122). This was evident in the adoption of the first EU regulation on exhaust emissions in 1970. The regulation was agreed upon following national legislation in France and West Germany, which would have hindered intra-community trade (Arp, 2002: 257). Directive 70/220/EEC still provides the basis for EU regulation on conventional pollutants today (Arp, 2002: 257). Until 1983, EU vehicle emissions Directives were transposed from United Nations Economic Commission for Europe (UNECE) regulations (Holzinger and Knill, 2004: 38), and were adopted by Member States on a voluntary basis until 1989 (Arp, 2002: 258). These regulations were often un-ambitious, and therefore largely uncontested by Member States and the car industry (Knill and Liefferink, 2007: 122).

EU policies on car emissions had strong 'economic policy roots' (Arp, 2002: 257) and an element of voluntarism throughout the 1970s and beyond. For example, Sorrell (1992: 766) notes that in the 1970s, in response to the first oil crisis, the UK government and UK car manufacturers agreed on voluntary targets to improve energy efficiency of new cars. The targets of this agreement were met, but the agreement was not renewed in the 1980s, 'as lower prices and more stable oil markets led to a loss of interest in energy efficiency' (ibid.). The interest in voluntary agreements and improvements in fuel efficiency was renewed in the 1990s, as discussed subsequently.

1980s: Struggles to Tighten Vehicle Emission Standards

During the 1980s, EU policies to reduce the emissions of conventional pollutants became contested by Member States, the car industry and the EU institutions alike. Already in 1970, Germany proposed to tighten emission standards to more stringent U.S. levels[3] (Boehmer-Christiansen and Weidner, 1995: 20). This objective was

[3]US standards were set under the 1970 Clean Air Act. A steep, technology-forcing reduction in the emissions of conventional pollutants was called for (Wurzel, 2002: 93). The Clean Air Act Amendments of 1977 delayed these standards until 1981 (Bresnahan and Yao, 1985). These standards remained unchanged until the uptake of the 1990 Clean Air Act Amendments, which set stricter targets that were phased in by 1996 (U.S Environmental Protection Agency Office of Mobile Sources, 1994: 2-3).

adopted in the German Environment Programme in 1971 (Wurzel, 2002: 95). The German 'defensive forerunner' (Liefferink and Andersen, 1998: 256) approach was influenced by the need to promote the competitiveness of the export-oriented German car industry (Holzinger and Knill, 2004: 40), and support the German environmental-technology industry (Wurzel, 2002: 10). These economic factors, together with growing environmental awareness in Germany, shaped the German position (Knill and Liefferink, 2007: 122-3; Wurzel, 2002: Chapter 5). Thus, the German initiative can be seen as a move to reconcile environmental concerns and the competitive advantage of domestic industries (Vogel, 1997). Notwithstanding, it took over 20 years for Germany to achieve this objective 'not only for itself, but more gradually for the EC as well' (Boehmer-Christiansen and Weidner, 1995: 20), as discussed below.

In 1983, Germany threatened to adopt unilateral measures to tighten emission standards, pressuring the EU to take action on this matter (Weale et al., 2000: 399-400). Consequently, the Commission presented in 1984 a draft Directive supporting the uptake of the U.S.-based standards (Knill and Liefferink, 2007: 123). This initiative was contested by the European car and oil industries, as well as by other car-producing Member States (Wurzel, 2002: 100). Accepting the proposed standards entailed a technological shift to the three-way catalytic converter and the introduction of unleaded petrol (Friedrich et al., 2000: 596; Wurzel, 2002: 128-130). The export-oriented German car industry, which 'had to adapt to American standards anyway [...] was thus basically more positive towards the proposal' (Knill and Liefferink, 2007: 123). Conversely, the introduction of catalytic converters imposed higher costs on the manufacturers of smaller cars relatively to the producers of larger cars (Wurzel, 2002: 131-133). The UK, France and Italy, whose carmakers produced smaller cars, were therefore opposed to stringent emission standards on economic grounds (Weale et al, 2000: 401). Moreover, some carmakers, led by Ford, invested in lean-burn engine technologies, which would be made obsolete by stringent emissions standards. Ford lobbied the Commission, warning that the introduction of catalytic converters would cause 'massive job losses in Europe' (Boehmer-Christiansen and Weidner, 1995: 125). A rift appeared between German carmakers, who produced larger, export-oriented cars, and the producers of smaller cars, and their respective Member States.

It was not until 1991 that the U.S.-based emissions standards were agreed upon under the Consolidated Directive 91/441/EEC (Council of the European Union, 1991). This agreement followed prolonged negotiations and political bargaining among Member States, the EU institutions and car and oil companies (for detailed accounts see Boehmer-Christiansen and Weidner, 1995; Knill and Liefferink, 2007; Weale et al. 2000; Wurzel, 2002). Catalytic converters became mandatory in all new cars from 1993 (Knill and Liefferink, 2007: 126). The Directive was the first mandatory EU car-emission policy measure (Wurzel, 2002: 146), and was seen as a victory for environmental interest groups (McLaughlin and Jordan, 1993: 128). However, as Boehmer-Christiansen and Weidner (1995: 20) observe, it took approximately 20 years to achieve this policy objective. Ironically, the introduction of the catalytic converter resulted in a decrease in fuel efficiency (Levy, 2005: 89), thus exacerbating the problem of rising CO_2 emissions, which came to the forefront of the EU's agenda in the 1990s, as discussed below.

1990s: Towards New Modes of Governance?

In the 1990s, several changes occurred in EU regulation of car emissions. These changes were associated with the wider shift from 'government to governance' in environmental policy (Knill and Liefferink, 2007: 162), as discussed in Chapter 1. They included increasing participation of private actors in policymaking, and the promotion of NEPIs, as advocated in the 5th EAP, and in line with the ecological modernisation discourse. The first signs of change appeared in 1991-1992. Following the impasse in EU policies to reduce car emissions in the 1980s, the Commission sought closer cooperation with the car and oil industries through the Auto-Oil I programme (Friedrich et al., 2000: 596-597). The aim of the programme was to outline a rational, cost-effective and scientifically informed basis for future legislation on vehicle emissions (Taminiau, 2006: 246). It was hoped that by nurturing close cooperation with these industries, some of the political complexities illustrated above could be resolved (Grant et al., 2000: 193). The Commission hoped that this partnership would overcome differences among Member States, as well as inter-Commission disputes between DG Industry and DG Environment (Wurzel, 2002: 175).

The Auto-Oil I programme resulted in the adoption of legislation on the emissions of conventional pollutants (Euro III and Euro IV standards) and fuel standards in 1999. This legislation was agreed upon following three years of negotiations between the Environment Council and the European Parliament (Friedrich et al., 2000: 603; Wurzel, 2002: 165-169) and disputes between the car and oil industries (Weale et al., 2000: 405). In the initial legislative proposal, suggested by the Commission in 1996, compliance costs fell disproportionally on the car industry. The car industry then successfully lobbied the European Parliament to tighten the fuel standards initially proposed by the Commission (Weale et al., 2000: 405). Carmakers also formed a temporary alliance with environmental NGOs in order to mandate stricter fuel quality standards (McGiffen, 2001: 117; Taminiau, 2006: 249). Despite the increasing participation of private actors, the Auto-Oil I programme lacked transparency and largely excluded environmental NGOs and Member State representatives (Taminiau, 2006: 245). The programme was criticised for being incomplete, un-ambitious and lacking transparency (Friedrich et al., 2000: 606-608). Thus, in practice it strengthened cooperation between the Commission and the car and oil industries while excluding other policy actors, including Member States, environmental NGOs and consumer groups.

At the same time, with increasing international concerns about global climate change, rising CO_2 emissions from cars became an important policy problem on the EU environmental policy agenda. In 1995, the Commission proposed a Community strategy for reducing CO_2 emissions from new cars (CEC, 1995). This approach consisted of three NEPIs: a voluntary agreement with carmakers; a fiscal framework; and a consumer information scheme. The voluntary agreement is studied in detail throughout this thesis. It suffices to say here that the strategy was symptomatic of the putative shift towards a more flexible approach to EU environmental policy, and the advocacy of NEPIs instead of command-and-control regulations. However, as mentioned above, voluntary approaches were not new in the governance of the car, but prevailed until the late 1980s. Nonetheless, as this section illustrated, EU governance of car emissions was increasingly characterised by contestation and compromise among economic, environmental, political and social interest groups, as discussed throughout this thesis.

Conclusions

This chapter illustrated some of the challenges the EU faced in its transport and car governance generally, and the governance of car emissions more specifically. The chapter began by introducing some of the main actors involved in EU car governance. It was demonstrated that economic actors (the car and oil industries) had a great impact on national and EU political societies, due to their vast resources and the structural dependence of political society on the prosperity of these industries in order to promote economic growth, and provide employment and tax revenues. It is therefore not surprising that both car-producing Member States and the EU have an interest in protecting the economic interests of the car and oil industries.

The chapter then examined the EU's common transport policy. It was argued that until the 1980s, the implementation of this policy was at best patchy. Nonetheless, throughout this period, road transport became the dominant mode of transport of both passengers and goods. Therefore, by the 1990s, the EU faced the challenge of addressing the unsustainable nature of the European transport system. The EU attempted to address this problem in consecutive policy documents, and most recently the 2011 Transport White Paper. However, to date, the challenge of reconciling economic growth, social mobility and environmental protection through the notion of sustainable mobility remains unresolved.

The chapter then examined EU car governance in more detail. It was noted that since the 1980s, carmakers evolved from 'national champions' to a truly transnational industry sector. These changes were facilitated by the Commission, which strived to liberalise the European car market in order to promote the competitiveness of European carmakers, in line with a neo-liberal free-market ideology. It was argued that the car industry increasingly enjoyed close relations with the Commission. These ties were strengthened through the CARS 21 process, which institutionalised the close relations between industry and policymakers. The section then proceeded by examining the response of the EU and Member States to the financial crisis which began in 2008. It was argued that despite efforts to privatise the European car industry, the close

connections and interdependencies between the car industry and political society at the national and EU-levels alike were still evident.

The EU's policies to reduce car emissions were then discussed in some detail. The economic rationale for these measures, from their inception in the 1970s, was noted, as were their voluntary origins. In the 1980s, conflicting interests of promoting economic growth and environmental protection became increasingly evident, and resulted in a protracted policymaking process. In order to overcome these conflicts, in the 1990s the Commission adopted a more cooperative approach, based on partnership and the advocacy of NEPIs, as seen in the Auto-Oil programme and the Community strategy on car CO_2 emissions. Thus, EU governance of car emissions evolved over time to accommodate conflicting economic and environmental interests.

Overall, this chapter outlined some of the complexities and contradictions inherent in EU car governance. In particular, it was noted that the need to promote continuous economic growth and facilitate social mobility often contradicted the need to ensure environmental protection. The notion of sustainable mobility, employed by the Commission to overcome these differences, has so far proved difficult to implement. These complexities were further influenced by the interdependencies among economic, political and social actors at both the national and the EU-levels. These themes are explored in more detail in Chapter 3.

Chapter 3
A Neo-Gramscian Perspective on European Union Car Governance

Introduction

EU car governance is increasingly characterised by compromises between economic growth and environmental protection. These compromises are shaped through complex and contested power relations among a multitude of public and private policy actors. While Chapter 2 began unravelling these trends, this chapter explores a possible theoretical framework for explaining these complexities. Understanding how EU car governance is shaped through interactions between public and private policy actors at multiple spatial scales can shed light on the questions of who governs and how (Peters and Pierre, 2009: 92), thereby helping understand the essential characteristics of EU car governance. This chapter identifies a neo-Gramscian political economy perspective as a possible contender for explaining the power relations that shaped the policy process of the ACEA agreement.

The chapter continues by examining the contribution of some existing theories of EU governance to explaining the policy process of the ACEA agreement. It argues that while multi-level and network governance approaches offer some important insights into the complexities of EU governance, they do not fully address the unequal distribution of power among various policy actors; a conspicuous gap in their analysis. Political economy approaches are then considered as candidates for explaining these power relations. While these approaches emphasise the importance of economic interest, international and comparative political economy perspectives remain state-centric and do not adequately account for the power of non-state actors. Critical political economy approaches are subsequently introduced as possible alternatives, as they account not only for the power of states, but also of other actors. A claim developed in the chapter is that a neo-Gramscian perspective complements other critical approaches, and potentially provides a framework for understanding the complex relations among economic, political and societal actors – a claim that can be tested against the development of EU governance. The main concepts of this perspective are

then introduced. In order to provide the context for the empirical and theoretical analyses of this thesis (Chapters 5-8), the neo-Gramscian perspective is then briefly applied to understanding EU governance and environmental governance, and the governance of the car more specifically.

Conceptualising EU Governance: Some Existing Approaches

Governance approaches have become increasingly popular in EU studies since the early 1990s (Hix, 1998: 38; Rosamond, 2000: 109). These perspectives commonly conceptualise the EU as a sui-generis political system of 'governance without government' (Hix, 1998: 38; Pollack, 2010: 35), combining a 'unique set of multi-level, non-hierarchical and regulatory institutions, and a hybrid mix of state and non-state actors' (Hix, 1998: 39). Concepts that have sought to explain EU governance include multi-level and network governance approaches (Kohler-Koch and Rittberger, 2006: 33). These are discussed in some detail below.

Multi-level Governance

The concept of multi-level governance (MLG) embodies the general characteristics of EU policymaking. The term 'multi-level' refers to the territorial tiers at which the EU, as a supranational body, operates – on local, national, regional and international scales (Kohler-Koch and Rittberger, 2006). The term 'governance' refers to the growing interdependence and cooperation among state and non-state actors (Bache and Flinders, 2004: 3). The literature on multi-level governance mainly focuses on vertical (territorial) aspects of EU governance, and is concerned with the 'shift of authority away from national governments towards both supranational and subnational actors' (Pollack, 2005b: 384). In this view, the EU has become an asymmetrical political system where power is dispersed 'between levels of governance and amongst actors' (Rosamond, 2000: 110). Multi-level governance attempts to 'depict *complexity* as the principal feature of the EU's policy system and its emphasis on variability, unpredictability and multi-actorness' (Rosamond, 2000: 111, emphasis in original). Thus, it provides a 'compelling *description* of EU policy-making processes' (Fairbrass

and Jordan, 2004: 164, emphasis in original). However, multi-level governance is not a parsimonious theory, and offers a '(dis)ordering framework' for understanding EU governance' (Rosamond, 2000: 110), so that 'it is often unclear about what actually is *explained*' (van Apeldoorn et al., 2003: 27, emphasis in original, see also Fairbrass and Jordan, 2004: 164). Theoretically, therefore, it is 'unclear whether MLG refers to processes or to situations, to strategies or to structures' (Piattoni, 2009: 163). As Nugent and Paterson (2003: 104) observe, multi-level governance is 'in danger of presenting the system as too flat and not sufficiently recognizing that some actors are better placed and are more powerful and influential than others'. Multi-level governance therefore does not adequately account for the power relations that shape EU governance.

Scholars employing multi-level governance approaches to environmental policy often emphasise the 'unique and contested vertical allocation of powers' between Member States and the EU (Fairbrass and Jordan, 2004: 148). This is an important contribution to understanding the governance of the car. Indeed, a multi-level governance approach can reveal the interactions among actors across multiple spatial scales, emphasising the relations between national governments and the EU. These perspectives might also examine the dispersion of policy instruments from national to EU-level, and vice versa. Thus, they might see the uptake of the ACEA agreement as 'policy transfer' (Dolowitz and Marsh, 1996) from Member States, such as the Netherlands or Germany, to the EU-level. A multi-level governance perspective therefore provides a good starting point for the empirical analysis of this thesis. Since the power of policy actors in the EU is nested in various spatial scales, it makes sense to examine the interactions among national, regional and international actors. However, as noted above, multi-level governance does not adequately account for changing power relations among public and private policy actors. This is an important omission, as understanding governance requires understanding the power relations that underpin it (Chhotray and Stoker, 2009: 240; Peters and Pierre, 2009: 92), as noted in Chapter 1. There is therefore a need to consider alternative theoretical approaches to understanding EU car governance.

Network Governance

A possible contender for explaining EU car governance is a network governance approach. Network perspectives emphasise the role of issue-specific actor-constellations in shaping governance (Pollack, 2010: 39; Rosamond, 2000: 123). In EU studies, these approaches focus on horizontal aspects of EU governance, and describe transnational networks, ranging from closed 'policy communities' to more participatory 'issue networks' (Peterson, 2009: 109; Pollack, 2005b: 384). Networks, it has been claimed, shape the informal political processes of the EU (Peterson, 2009: 109), and 'determine both the relative influence of various actors and the substantive content of EU policies' (Pollack, 2005b: 384). Two related contributions can be discerned from network approaches. Theoretically, these approaches acknowledge that 'mutual dependencies exist between public and private actors' (Wurzel, 2002: 49). Empirically, network perspectives provide an analytical tool for identifying policy actors and classifying the interactions between them (Wurzel, 2002: 46). However, while network approaches provide important insights into the complex relations between public and private policy actors, these approaches lack a theory of power, and need to be combined with a range of other theories in order to explain policy outcomes (Peterson, 2009: 117).

Network approaches have been combined with policy instrument perspectives in order to explain how the level of policy network complexity determines the choice of policy instrument (e.g. Bressers and O'Toole, 1998; Howlett, 2000). In this view, voluntary agreements were likely to be adopted when state capacity is low, and level of network complexity is low (Howlett, 2000: 417). However, as Bressers and O'Toole (1998: 236-237) conceded, we need to better understand the social setting in which policy instruments and instrumentation are shaped. Network perspectives, at best, offer a partial explanation of these.

Studies on EU car governance have also employed network perspectives (McLaughlin and Maloney, 1999; Wurzel, 2002). For example, Wurzel (2002) used a network approach mostly as an analytical method (p. 268) to examine how policy networks in Germany and the UK shaped EU car emissions regulations from the 1970s to the 1990s. His thorough analysis provided important insights into the complex

interactions and interdependencies among networks of national and EU-wide public and private policy actors (e.g. pp. 259-262). However, since network perspectives lack a clear theory of power, they cannot adequately explain the complexities and interdependencies among public and private policy actors inherent in EU governance.

The above-mentioned perspectives on EU governance provide a good starting point for the empirical investigation of this thesis. They shed light on the multi-level, multi-actor nature of EU governance, and the complex relations and interdependencies among public and private policy actors. These approaches have broadened the 'analytical horizon' of EU studies (Jachtenfuchs, 2001: 258). However, they largely remain at a pre-theoretical stage (Jessop, 2004: 61; Kohler-Koch and Rittberger, 2006: 42-43; Peterson, 2009: 114, van Apeldoorn, 2002: 41), and often fail to explain the asymmetrical relations of power among public and private policy actors across multiple spatial scales, and how these shape EU governance and its policy instruments and instrumentation (Jachtenfuchs, 2001: 258; Peterson, 2009: 114). As van Apeldoorn (2002: 22) notes, EU governance approaches 'cannot account for the underlying social power relations that emanate from the structures of capitalism' (van Apeldoorn, 2002: 22). Questions of 'political power and rule' need to be addressed in order to better explain processes of EU governance (Jachtenfuchs, 2001: 258). The following section therefore continues by examining the possible contribution of political economy approaches to explaining the complexities and interdependencies characteristic of EU car governance.

Political Economy Approaches to the Study of European Union Governance

Political economy perspectives encompass a wide range of theoretical approaches, which hold in common the study of the interface between politics and economics (Gilpin and Gilpin, 1987: 8). In EU studies, political economy approaches can be divided into international political economy (IPE), comparative political economy (CPE) and critical approaches (Cafruny and Ryner, 2009). These approaches are briefly introduced below.

International Political Economy

Rooted in International Relations, IPE approaches can be described as the study of 'politics of international economic relations' (Cafruny and Ryner, 2009: 224). These approaches are largely concerned with the relations among states and other actors in the international political-economic arena (Smith, 2006: 527). Despite emphasising the economic motivations of political actors, many of these perspectives remain state-centric and do not examine the interactions among public and private actors (Verdun, 2003: 92).

In EU studies, IPE approaches have focused on the European economic system, including the Single European Act, the creation of the single market in the context of wider international and global political-economic processes, the European Monetary Union (Cafruny and Ryner, 2009: 225; van Apeldoorn, 2000: 235), and the role of the EU in the international political economy (Smith, 2006: 527). Moreover, IPE scholars have 'tended to neglect environmental issues' (Newell, 2008: 510). This is a shame considering 'the centrality of market actors to environmental governance' (ibid.). IPE approaches to car governance often emphasise the relationship between car use and economic growth. Paterson (2007: 98-99) notes two lines of inquiry characteristic of these approaches. Firstly, the car industry is seen as a paradigmatic example of a globalised industry (e.g. Dicken, 2003). Secondly, they aim to explain the influence of government policies on the spatial distribution of car production.

While IPE approaches contribute to the understanding of international economic cooperation, EU integration, changes in global patterns of production, and the role and operation of transnational corporations, they have been criticised on several grounds. Firstly, with regards to EU studies, the role of non-state actors in these approaches remains 'ghetto-ized' (Cowles, 2005: 26). Secondly, IPE approaches tend to idealise liberal principles and assume that interests and actors' motivations can be measured according to these (Cafruny and Ryner, 2009: 225). Thirdly, IPE perspectives fail to account for how and in whose interest 'national interests' are formed, and how interest groups interact on a transnational level (Underhill, 2000: 7). Fourthly, with regards to car governance, IPE approaches have not come to terms with 'the importance of

consumer culture in sustaining twentieth century capitalism' (Paterson, 2000: 257). In summary, IPE approaches often overlook the political consequences of structural interdependencies between states and society, and the role of private actors in shaping policymaking (Underhill, 2000: 7). Thus, they cannot adequately account for the complex power relations that shaped EU car governance.

Comparative Political Economy

Comparative political economy (CPE) approaches stress the importance of state intervention in market operation (Cafruny and Ryner, 2009: 226), and 'national variations in capitalist relations of production' (Mikler, 2009: 30). This literature examines divergent national institutions, policies and governing capacities that coordinate different types of capitalism (Gamble, 2000: 121). Two main modes of governance are commonly distinguished. Liberal market economies call for "more market less state" (Story, 2000: 132-133). In coordinated market economies state intervention in economic activity is commonplace (Höpner and Schäfer, 2010: 345).

CPE accounts became a 'significant and growing part' of attempts to explain EU integration (Smith, 2006: 528), (see for example Hooghe, 1998; Hooghe and Marks, 1997; Joerges and Everson, 2005; Höpner and Schäfer, 2010). CPE has also been applied to the study of car governance (Mikler 2009). Mikler examined the strategies of German, Japanese and U.S. carmakers in addressing environmental problems. He found differences among the strategies of different companies, which he related to national institutional variations. His analysis provided some interesting insights, emphasising the role of national institutions in shaping the responses of the car industry to environmental concerns.

Studies employing CPE approaches contributed to the understanding of EU governance and car governance. However, the theoretical explanations offered by these perspectives are limited to differences among national institutional settings (Höpner and Schäfer, 2010: 345) and how these affect firms' behaviour. Schmidt (2008: 311) argues that these approaches are often too 'firm-centred', ignoring the role of the state and other actors. Further, she notes that 'the binary division into ideal-types tends to be too reductive' (ibid.). CPE has also been criticised for focusing on the national level, rather

than examining how various types of capitalism operate within the constraints of the European and global political economy (Gamble, 2000: 122; Strange, 1997). While CPE does offer an explanation of the relations between national institutions and markets, it does not fare well in theorising the role of other private and public actors in shaping governance processes.

Comparative and international political economy approaches present contrasting viewpoints on political economy. The former emphasise the international economic and political-institutional settings in which actors operate in the global political economy. The latter focuses on national governance arrangements that shape different forms of capitalism. While acknowledging the power of economic actors in the national and international political economy, neither of these approaches fully accounts for the complex power relations among private and public actors. The remainder of this section examines whether critical political economy approaches can contribute to this understanding.

Critical Political Economy Approaches

Critical political economy approaches, it is argued here, offer a more nuanced understanding of EU governance. Whereas international and comparative political economy approaches see states and markets as 'separate spheres of social reality', critical approaches argue that these spheres are in fact related (Pistor, 2005: 109). In Cox's (1981: 208) seminal definition, critical theory

> [D]oes not take institutions and social and political power relations for granted but calls them into question by concerning itself with their origins and how and whether they might be in the process of changing.

Thus, critical theories study 'the processes and consequences of the way power is acquired, distributed, and exercised' (Manners, 2006: 77-78). Critical approaches to environmental studies emphasise 'the interests, power structure and assumptions that underlie environmental behaviour' (De Sombre, 2011: 138). In EU studies, critical approaches are largely based on Marxist historical-materialist understanding of 'the capitalist context of social, economic and political relations' (Manners, 2006: 78-80). Regulation theory, open Marxism, and neo-Gramscian approaches have all been applied

to explaining the process of EU integration (Cafruny and Ryner, 2009: 227-230; Manners, 2006: 78-80).

Regulation theory focuses on modes of regulating capital accumulation at particular stages of capitalism. For example, the single market and the European Monetary Union are seen as evidence of the promotion of post-Fordist neo-liberal modes of governance (Cafruny and Ryner, 2009: 230). These approaches would conceive EU car governance and its policy instruments, including voluntary agreements, as characteristics of a neo-liberal regime. Open Marxism emphasises class struggles between capital and labour (Bieler and Morton, 2003: 468). In EU studies, open Marxism has sought to explain EU politics in terms of 'class, imperialism, labour commodification and institutionalist bias' (Manners, 2006: 79). Open Marxism would most likely analyse EU car governance and its instrumentation in terms of class struggles between capital and labour. Regulation theory can be seen as a state-centric approach, while open Marxism is more society-oriented, with a strong emphasis on the class relations between capital and labour. Table 3.1 summarises the key actors and power relations emphasised in the various theoretical perspectives discussed above.

It has been claimed that a neo-Gramscian approach can contribute to the understandings of both regulation theory (Cafruny and Ryner, 2009: 231), and open Marxism (Bieler and Morton, 2003: 475), by providing an explanation of power relations among private and public actors. This claim is scrutinized in this thesis. The following section introduces a neo-Gramscian perspective in more detail.

Theoretical perspectives	**Main actors**	**Conception of power**
Multi-level governance	Emphasis on vertical actors – Member States, EU institutions, international organisation	Offers a description of complexity, but does not adequately account for the unequal distribution of power among public and private actors.
Network governance	Issue-specific constellations of public and private actors, focus on horizontal networks	Acknowledge and describe mutual dependencies among public and private actors, but lack a theory of power and need to be combined with a range of other theories.
International political economy	States and international actors	Emphasise political-economic processes, but do not adequately explain structural dependencies among public and private actors, the power of private actors in policymaking, and the complexities inherent in governance processes
Comparative Political Economy	National institutions and economic actors	Explain power relations between markets and states, but do not adequately account for power of other private actors, or multi-level public actors.
Regulation Theory	State, capitalist class	Focus on modes of regulating capital accumulation – state-centric emphasis
Open Marxism	Capital and labour	Power struggles between capital and labour are reflected in institutional conflicts.

Table 3.1: Summary of key actors and power relations emphasised by key theories

A Neo-Gramscian Perspective

Neo-Gramscian perspectives offer an understanding of the complex and contradictory relations among economic, political and societal actors. Developing Marxist political theory, Gramsci sought to explain how the capitalist class gained and maintained dominance through alliance-building with other groups (Andrée, 2011: 175; Hall, 1991: 8). In Gramsci's view, empirical observations of political science should be analysed in the context of the 'relations of force' (Gramsci, 1971: 180-185). These are the material, organisational and discursive terrains, and their interplay across the mutually constitutive levels of civil society, the state and the global order (Gramsci, 1971: 176). Neo-Gramscian scholars have moved away from the historical context in which Gramsci devised his theory in the early 20th century. They now use different theoretical and empirical lenses in their analysis, creating a multitude of neo-Gramscian perspectives (Morton, 2001: 37). This thesis develops an approach similar to that

employed by David Levy, Daniel Egan, Peter Newell and others (e.g. Levy and Egan, 2003; Levy and Newell, 2005), which does not over-emphasise the 'productionist' nature of social relations (Newell, 2008: 516). The framework relies on Gramsci's notions of hegemony, historical bloc, passive revolution and war of position, as discussed below.

Hegemony

It is widely agreed that Gramsci's main contribution to political science lies in his understanding of the concept of hegemony (Levy and Egan, 2003: 805; Showstack Sassoon, 1982: 95). While hegemony means different things to different scholars (see Anderson, 1976; Laclau and Mouffe, 1985), Gramsci used the concept to explain the means by which an economic group gained influence - and eventually dominance - in political and civil society. He identified three stages leading to hegemony (Gramsci, 1971: 180-1; Mouffe, 1979: 180). In the first stage, 'the primitive economic moment', the professional interests of a group were expressed. In the second stage, these interests manifested at an economic level. The third stage was that of hegemony, in which

> One becomes aware that one's own corporate interests, in their present and future development, transcend the corporate limits of the purely economic class, and can and must become the interests of other subordinate groups too (Gramsci, 1971: 181-2).

Thus, while hegemony is rooted in the economic sphere (Anderson, 1976: 18), it is expressed in the realms of civil society and its institutions, including the media, educational system and religious institutions; and its ideology and "cultural organisation" (Bates, 1975: 353-357). In Gramsci's view, the political power of a hegemonic group was therefore based on consent rather than coercion. Consent was established through 'the myriad of institutions and relationships in civil society' (van Apeldoorn et al, 2003: 36-37).

A hegemonic order is never stable, but is based upon a continued process of contestation and compromise (van Apeldoorn, 2002: 20). The interests of the hegemonic class prevail only up to a certain point (Levy and Egan, 2003: 807). Compromises are therefore often made on secondary issues in order to 'maintain support and alliances in an inherently unstable and fragile system of political relations'

(Jessop, 1982: 148). These compromises ensure that 'the essential economic function of the directing class remains' (Showstack Sassoon, 1987: 116), while rallying the support of social groups that come to accept the hegemonic project as their own (Okereke and Bulkeley, 2007: 24). Hegemony is thus achieved through a dialectical process of contestation and compromise (Bieler, 2002: 581; Jessop, 1982: 142; Okereke and Bulkeley, 2007: 24; van Apeldoorn, 2002: 20).

Through the notion of hegemony, Gramsci sought to explain the relationship between state and civil society (Showstack Sassoon, 1982: 100). It is through the political sphere that a hegemonic order is best understood (Showstack Sassoon, 1987: 116). Therefore, questions of political practice cannot be reduced to the economic sphere (Jessop, 1982: 145). Rather, Gramsci portrayed the relationships between 'the different dimensions of reality, the economic, political, and cultural' (Showstack Sassoon, 1987: 111). In societies where hegemony prevailed, the dominant social group did not need to rule directly. It relied on political leaders who 'recognised the hegemonic structure of civil society as the basic limit of their political action' (Cox, 1993: 51). This led Gramsci to widen his definition of the state (Cox, 1983: 126) and the political arena (Showstack Sassoon, 1987: 111) to include 'political society' as seen in political institutions and 'civil society', which includes both economic actors and other social groups and institutions (Gramsci, 1971: 262-263). Gramsci's concept of the extended state reflected upon the fact 'there was often an organic fusion between state and civil society' (Gill and Law, 1993: 93; Gramsci, 1971: 12), to the extent that civil and political societies became 'one and the same' (Gramsci, 1971: 160). Gramsci's distinction between state and civil society is therefore methodological rather than organic (Adamson, 1980: 217). These categories 'retained a certain analytical usefulness but ceased to correspond to separate entities in reality' (Cox, 1993: 51). In other words, while civil and political societies are analytically distinguished, they are also intertwined (Forgacs, 1988: 224).

Historical Bloc

Where hegemony is successfully practiced, it is reflected in the construction of what Gramsci termed an historical bloc[4] (Jessop, 2002: 6). The historical bloc represents the integration of various social groups that form a dynamic and contestable ensemble of economic, political and social interests (Bieler, 2002: 581; Rupert, 1993: 81). It is configured of state authority, economic dominance and civil society legitimacy (Levy and Egan, 2003: 806; Levy and Newell, 2005: 50). The diverging interests within the historical bloc are mediated through the construction of an ideological discourse that bridges these, while maintaining the dominance of the hegemonic group (van Apeldoorn, 2002: 20). By aligning material, organisational and ideological practices of different groups, an organic link is formed between political and civil society (Gill and Law, 1993: 93-4). The historical bloc is therefore more than the alliance among various groups, it is also the alignment of material, organisational and ideological practices that serve to reproduce an existing social order (Levy and Egan, 2003: 806; Levy and Newell, 2005: 50; van Apeldoorn, 2002: 20).

For this reason, neo-Gramscian approaches often distinguish between two levels of analysing a historical bloc (Andrée, 2011: 175-6). The first level examines the 'alliance of social groups around a set of material practices and justificatory discourses for which they seeks to establish widespread acceptance' (Andrée, 2011: 176). The second level examines the alignment of material, organisational and ideological practices that reproduce a hegemonic order (Andrée, 2011: 176; Bieler and Morton, 2001: 20; Levy and Egan, 2003: 806). These levels of analysis are closely related, as building hegemonic alliances requires not only economic mobilisation, but also moral and ideological grounding (Levy and Newell, 2005: 50).

The actors involved in a historical bloc include the capitalist class, civil and political societies and organic intellectuals. The capitalist class comprises a minority economic group that 'owns and control the means of production' (van Apeldoorn, 2002: 22-3). This group is divided into rival class fractions of industrial and finance capital,

[4] Some scholars maintain that an historic bloc can be constructed without a hegemonic class (Adamson, 1980: 178)

and nationally, regionally or internationally-oriented fractions (Overbeek, 2004: 6-7). These fractions, nonetheless, represent 'the general capitalist interest' of promoting economic growth and capital accumulation (van Apeldoorn, 2001: 72-73).

Since economic growth is a prerequisite for the survival of capitalism, 'owners of capital exercise structural power over state managers' (Newell, 2008: 515). The structure of capitalism and the economic dependence of political society on tax revenues and 'future investment decisions of capitalist firms tend to make the political system treat the special interests of business as the general interest' (van Apeldoorn et al., 2003: 28). Thus, the state, or political society, is seen by Gramsci as

> [T]he organ of one particular group, destined to create favourable conditions for the latter's maximum expansion. But the development and expansion of the particular group are conceived of, and presented, as being the motor force of a universal expansion, of a development of all the "national" energies. In other words, the dominant group is coordinated concretely with the general interests of the subordinate groups, and the life of the state is conceived of as a continuous process of formation and superseding of unstable equilibria (on the juridical plane) between the interests of the fundamental group and those of the subordinate groups – equilbria in which the interests of the dominant group prevail, but only up to a certain point, i.e. stopping short of narrowly corporate economic interests (Gramsci, 1971: 182).

Political society is perceived as a site of securing the hegemony of an economic group. However, in order to secure this hegemony, the interests of other groups must be taken into consideration, resulting in a dialectic process of contestation and compromise among public and private policy actors.

Civil society has a dual role in Gramsci's political analysis. It is seen as part of the 'extended state', as it is 'the ideological arena in which hegemony is secured' (Levy and Egan, 2003: 806). However, as civil society is relatively autonomous, it is also seen as a key site of political contestation (Levy and Newell, 2005: 50). Thus, it can be seen as the 'terrain upon which social classes compete for social and political leadership or hegemony over other social classes' (Davies, 2011: 105). Gramsci also emphasised the importance of 'organic intellectuals' (Gramsci, 1971: 3) in constructing historical blocs (Bieler, 2002: 581; 2006: 124). These intellectuals are 'organically linked to a specific social group'. They include politicians, scholars, journalists, industry representatives and members of NGOs (van Apeldoorn, 2002: 30-31). Organic intellectuals give each

social group 'homogeneity and an awareness of its own function, not only in the economic but also in social and political fields' (Gramsci, 1971: 5, see also Levy and Egan, 2003: 808-9). These actors 'frame transformations in a way that make sense to the public at large' (Andrée, 2011: 176).

Since hegemony is a 'continuous struggle' (Davies, 2011: 103) among competing actors, the historical bloc continually evolves through processes of contestation and compromise. As Morton (2007: 97) notes, the historical bloc is 'constantly constructed and contested and is never a static reflection of an alliance of social class forces' (Morton, 2007: 97). It is shaped by the 'structural interdependencies and conflicts between states and capitals' (Davies, 2011: 103). The historical bloc 'rests on insecure foundations, creating potential for instability and change to arise endogenously as well as from external shocks' (Levy and Egan, 2003: 807). The challenge of a neo-Gramscian perspective is therefore to understand the dynamics of coercion, consent and resistance that constitute any hegemonic configuration' (Davies, 2011: 103). These processes can be understood through the Gramscian notions of passive revolution and war of position, discussed below.

Passive Revolution and War of Position

As noted above, social groups endeavour to gain or maintain dominance in the historical bloc through a process of contestation and compromise with other groups. Gramsci distinguished between two such strategies, passive revolution and war of position. Passive revolution is a strategy employed by a relatively weak hegemonic group in order to preserve the social structure (Levy and Egan, 2003: 807; Levy and Newell, 2005: 51). Gramsci (1971: 115) defined passive revolution as 'the political form whereby social struggles find sufficiently elastic frameworks to allow the bourgeoisie to gain power without dramatic upheavals'. The concept refers to social and political reforms which occur through consent rather than coercion (Adamson, 1980: 186; Cox 1983: 129). It relates to the 'reorganisation of economic, political, and ideological relations, often in response to a crisis that maintains the passivity of subordinate groups, and the separation of leaders and led' (Jessop, 1982: 150, see also Showstack Sassoon, 1982: 129). Passive revolution relies on 'extensive concessions' (Levy and Newell,

2005: 51) that forestall more comprehensive challenges from other social groups, and thus serve to reproduce the dominance of the hegemonic group (Rupert, 1993: 81). By incorporating new groups into the hegemonic project, the passive revolution serves to strengthen the historical bloc (Showstack Sassoon, 1987: 209). Where this strategy is successful, 'established ways of thinking and acting are unlearned and replaced with new habits and norms' (Davies, 2011: 107). The concept of passive revolution is useful in explaining compromises made by hegemonic groups in order to maintain their dominance. It can also be employed as a 'criterion for interpretation' by counter-hegemonic groups, as it helps understand the resilience of a hegemonic group despite political and economic crises (Showstack Sassoon, 1987: 205).

In order to gain political influence, counter-hegemonic groups need to engage in a war of position. Gramsci contrasted the concept of war of position with that of war of movement. The latter refers to 'a frontal assault on the state', whereas the former implies action within the realms of civil society (Forgacs, 1988: 224). Since civil society is the site of consent and hegemony, it is here that both the dominant group establishes its hegemony, and other groups liaise and build their social power (ibid.). Thus, the war of position entailed 'a struggle on the cultural front of civil society' in an attempt to influence social practices (Morton, 2007: 97). The war of position

> [C]onstitutes a longer term strategy, coordinated across multiple bases of power, to gain influence in the cultural institutions of civil society, develop organizational capacity, and to win new allies. As in the game of chess, power lies not just in the playing pieces, but in the configuration of forces relative to each other and to adversaries, and each set of moves and countermoves opens up new fissures and presents fresh possibilities to prise open the seams of a historical bloc (Levy and Newell, 2005: 51).

Counter-hegemonic groups must base their attempts to gain influence in a wider 'transformative process through which these various groups are enabled to participate actively and directly in the reconstruction of the social world' (Rupert, 1993: 81). They must 'unite various sectors around an alternative project which attempts to resolve fundamental problems' (Showstack Sassoon, 1982: 113). The war of position therefore requires building alliances and organisational capacity, and crucially germinating alternative ideologies in the institutions of civil society, including the educational system and the media (Femia, 1981: 52; Simon, 1991: 75; Showstack Sassoon, 1982:

113). Further, a successful war of position relies on understanding the relation between the economic structure and the ideological superstructure.

The concepts of passive revolution and war of position describe how a historical bloc evolves. These strategies shape political processes, and therefore need to be understood in political analyses (Morton, 2007: 98). Comparing these strategies, it can be seen that there is an 'integral asymmetry' between the strategy that a hegemonic group can employ, and that which other social groups might use in order to gain influence (Showstack Sassoon, 1987: 204-5). A hegemonic group needs to make concessions to other groups that still maintain its dominance. On the other hand, in order to gain influence, non-hegemonic groups need to rally support within civil society by promoting alternative ideologies and by disseminating 'radical ideas about man and society' (Femia, 1981: 52). These groups need to change the values, beliefs and norms that are widespread in civil society. While hegemonic economic groups hold an advantage, counter-hegemonic groups are still able to challenge and change hegemonic historical blocs. Therefore, Gramsci's concept of power is strategic rather than structural, suggesting that through the employment of material, organisational and ideological strategies, structurally-disadvantaged groups can challenge and influence hegemonic projects (Levy and Newell, 2005: 58-59).

Table 3.2 provides a summary of the key concepts discussed in this section. The remainder of this chapter continues by examining how these neo-Gramscian concepts can be applied to EU governance and environmental governance in general, and to the governance of the car specifically.

Critical concept	Key actors	Main propositions
Hegemony	• Economic interest groups	The interests of economic actors become the interests of civil and political societies, so that the economic project becomes universal
Historical bloc	• Economic groups • Civil and political societies • Organic intellectuals	Where hegemony is practiced, a historical bloc is formed. This bloc is constituted of alliances among various actors, and an alignment of material, organisational and ideological practices.
Passive revolution	• Weak hegemonic groups	Strategy employed by hegemonic groups to maintain their dominance. This includes non-core threatening compromises to other groups.
War of position	• Counter-hegemonic groups	Counter-hegemonic groups need to gain support within civil and political society in order to gain influence

Table 3.2: Summary of critical arguments of a neo-Gramscian approach

Neo-Gramscian Perspectives on European Union and Environmental Governance

Neo-Gramscian perspectives have been applied to the study of EU governance (inter alia Cafruny and Ryner, 2003; Cox, 1993; van Apeldoorn, 2002; van Apeldoorn et al. 2003), and environmental governance (e.g. Levy and Egan, 1998; 2003; Levy and Newell, 2002; 2005). However, none of these accounts have explored EU environmental governance *per se*. These scholars often employ IPE-inspired neo-Gramscian perspectives. Pioneered by Robert Cox (1981, 1982), these approaches are concerned with world hegemony, the emergence of a transnational historical bloc, and the formation of transnational classes (Schwarzmantel, 2009: 6; Worth, 2009: 24). In particular, they examine the hegemony of a transnational, neo-liberal historical bloc. This thesis draws on some of the insights of these perspectives, but provides an EU-centred neo-Gramscian account. As suggested by van Apeldoorn (2002: 46), in

explaining EU governance 'we should analyse state-society relations at the European level and examine which social groups or classes (or class fractions) are dominant, or indeed hegemonic'. For this purpose, existing neo-Gramscian interpretations provide some important insights into EU governance and environmental governance, as elaborated below.

European Union Governance

A small number of neo-Gramscian accounts of EU governance appeared in recent years (inter alia Cafruny and Ryner, 2003; Cox, 1993; van Apeldoorn, 2002). These perspectives emphasised the transnationalisation of finance and production at the material level, and the shift from Keynesianism to neo-liberalism on the ideological level (Bieler and Morton, 2001: 4; Cox 1993: 259-60; Jessop, 2002: 219; van Apeldoorn 2002). They were often concerned with the role of transnational corporations in shaping EU governance, in the wider context of globalisation (Bieler and Morton, 2001: 4). Neo-Gramscian scholars perceive the process of EU integration, which accelerated with the Single European Act, the treaty of Maastricht and the European Monetary Union, as part of a hegemonic neo-liberal project (Bieler, 2006: 126; Bieler and Morton, 2001; Cafruny and Ryner, 2003; van Apeldoorn, 2002). This neo-liberal, transnational hegemony: 'is shaped, and continuously reshaped, in the process of struggle, compromise, and readjustment' (van Apeldoorn et al., 2003: 38).

Although the neoliberal project was characterised by different governing processes and strategies (Jessop, 2002: 259-267; van Apeldoorn, 2001: 82; van Apeldoorn et al., 2003: 38), some general trends in EU neo-liberal governance can be discerned. Neo-liberalism called for 'more market, less state' (Jessop, 2002: 216), evident in trends of privatisation, deregulation and market liberalisation (van Apeldoorn, 2002: 1). These trends, which prevailed since the economic crisis of the 1970s, resulted in a 'fundamental restructuring of state-society relations' in the EU (van Apeldoorn, 2002: 1). The efforts to coordinate increasingly complex societies 'generated a widespread turn to old and new forms of governance without government' (Jessop, 2002: 217), including public-private partnerships, reliance on self-organisation and networks (Jessop, 2002: 234-236). These strategies were employed in order to

'separate economic policies from broad political accountability in order to make governments more responsive to the discipline of market forces, and correspondingly less responsive to popular-democratic forces and processes' (Gill, 2003a: 47). Thus, in a neo-Gramscian view, while EU governance was purportedly opened to a greater number of policy actors, in practice it privileged economic actors over other interest groups.

Existing neo-Gramscian perspectives on EU governance offer a good understanding of the changing structural power of transnational capital. These approaches often see the EU as a player in the wider international political economy, and offer important insights into the relations between capital and the EU institutions. They also perceive the uptake of new modes of governance as emblematic of the rising power of economic actors. However, they often fail to account for the interaction among social forces within the EU, or conceive class relations strictly as those between capital and labour. These approaches often over-emphasise the role of economic actors, while neglecting to take account of other social forces. Neo-Gramscian approaches to environmental governance have paid more attention to the role of counter-hegemonic groups in shaping governance processes, as discussed below.

Environmental Governance

Similarly to neo-Gramscian accounts of EU governance, existing neo-Gramscian approaches to environmental governance scrutinise neo-liberal hegemony and the role of transnational corporations in shaping global environmental governance (Newell, 2008: 522). These approaches maintain that since the late 1980s, environmental governance has been shaped by a hegemonic, finance-led, fossil-fuelled historical bloc (Paterson, 2009: 107). This historical bloc is threatened by the challenges of environmental governance, and governing climate change in particular, which potentially involve changing capitalist patterns of production and consumption (Levy, 2005: 76; Newell, 2000: 98). The prominence of environmental problems generally, and climate change specifically has therefore 'opened up tensions in the historical bloc' (Levy and Egan, 2003: 825), rendering neo-liberal environmental hegemony unstable and contested (Levy and Newell, 2002: 86).

Business groups sought to maintain their dominance by incorporating environmental considerations into their 'corporate environmental management' strategies (Levy and Newell, 2005: 59). These strategies can be understood as a 'passive revolution', observed on the material, organisational and discursive levels (Levy and Egan, 2003: 823). On the material level, firms developed 'green' products and technologies to secure their market position and competitive advantage. On the organisational level, alliance-building with private and public actors was evident. On the discursive level, the scientific and economic bases for regulation were challenged, while companies used 'public relations to portray themselves and their products as "green"'. (Levy and Newell, 2005: 63). More broadly, the win-win discourses of ecological modernisation, environmental stewardship and sustainable development prevailed (Levy and Egan, 1998: 353-354; Newell, 2008: 524). Neo-Gramscian scholars perceive these corporate environmental management techniques as a passive revolution strategy intended to reconfigure an unstable historical bloc by making some compromises to accommodate environmental concerns, while maintaining the power of the hegemonic economic group (Levy and Egan, 2003: 825).

Environmental NGOs can be seen as engaged in a 'war of position'. They often challenged the hegemonic project, and attempted to 'fill the void left by declining regulation by states, through developing schemes to put pressure on firms to change practices' (Paterson, 2009: 110). Although structurally disadvantaged in comparison to business groups, environmental NGOs are 'aware of their potential agenda-setting functions' (Coen, 2005: 197). These groups often contest environmental problems caused by capitalism. However, increasingly environmental NGOs have become 'major advocates for market solutions and private partnerships, providing legitimacy for market-based approaches to environmental problems' (Levy and Newell, 2005: 54). Thus, while environmental NGOs are still perceived as a site of contestation to the hegemonic project, they are increasingly incorporated into this project, securing the stability of the historical bloc. Therefore, they are perceived by neo-Gramscian scholars as playing 'the same dual role envisaged by Gramsci; as semi-autonomous arenas of cultural and ideological struggle, and also as key allies in securing hegemonic stability' (Levy and Newell, 2005: 54). Experts and academics, which form the category of

'organic intellectuals', were also influential in shaping current environmental governance arrangements. For example, Paterson (2009: 107) notes the influence of David Pearce and his colleagues (1989), who advocated the use of market-based NEPIs.

Political society, in turn, represents competing environmental and economic interests. For example, national authorities, such as departments of environment and industry, often represent conflicting interests (Levy and Newell, 2005: 62; Newell, 2008: 514). This is exacerbated at the EU-level, where multiple access points exist for the policy actors presented above (Coen, 2005: 199-201). Politicians, Levy and Egan (2003: 813) maintain,

> [A]re likely to protect business interests not just because of their structural dependence on business for tax revenues, employment and investment [...] but also because state managers have internalized the goal of promoting "competitiveness".

This reflects upon the 'ascendancy of a transnational historical bloc founded on a manifesto of privatization, unfettered international trade, the rollback of the welfare state, and industry self regulation' (Levy and Egan, 2003: 813).

The re-configuration of policy actors and material, organisational and discursive practices to accommodate environmental problems have resulted in the formation of what Newell (2008: 516) refers to as a 'sustainable development historic bloc'. The function of this bloc is to

> [D]istance global capitalism from the sources of environmental problems, accommodating some mild criticism of consumerism and globalisation without allowing the 'fatal connection' between the capitalist mode of production and the ecological crisis to be addressed (Newell, 2008: 516).

This bloc is aligned through the promotion of 'green' production and consumption, growing organisation through networks, and the ideological remits of ecological modernisation and sustainable development (Newell, 2008: 525).

Environmental governance is thus increasingly guided by an imperative 'to enable private actors to pursue their economic interests in ways which simultaneously promote sustainability' (Paterson, 2009: 107). The growing advocacy of NEPIs, including various economic measures, labelling schemes and voluntary regulation, as

the preferred mode of environmental governance both globally (Paterson, 2009; Levy and Newell, 2005) and in the EU (e.g. Jordan et al, 2003), is connoted with neo-liberal environmentalism. Newell (2008: 522) observed:

> Marketised environmental governance is a mode of neoliberal governance. That is to say, the modalities, ideologies and forms which environmental governance assumes inevitably bear the characteristics of the neoliberal economy of which they are part.

Neo-liberal environmentalism might therefore be 'flexible enough to accommodate challenges to its reach without confronting the relations of power which underpin it' (Newell, 2008: 518-519). However, the questions of how the interests of various policy actors shape and are shaped through environmental governance, and whose interests 'win' remain open both for action by environmental NGOs and other policy actors (Levy and Newell, 2002: 96), and to empirical and theoretical investigation. These questions are explored in this thesis, with regards to the governance of car-CO_2 emissions in the EU. The following section introduces a preliminary neo-Gramscian account of car governance, which provides some underpinning assumptions for the theoretical analysis of this thesis.

The Governance of the Car: Towards a Neo-Gramscian Perspective?

This thesis set out to investigate whether the complexities of EU car governance can be understood through a neo-Gramscian perspective. In particular, it is argued that a neo-Gramscian perspective potentially offers important insights into the interdependencies and complex relations among economic, environmental and political actors involved in these governance processes. In order to promote this understanding, it is important to outline the 'symbolic power' of the car, and its importance in civil and political society (Paterson, 2000: 257). This section therefore continues by illustrating the hegemonic position of the car in European society, as seen through its economic, political and social dominance. It then briefly outlines the threat of climate change to car hegemony. The section concludes that in light of the economic, social and political importance of the car in European society, a neo-Gramscian perspective can offer some interesting

insights into the complexities inherent in its governance. These themes will be explored in more detail in Chapter 8 of this thesis.

The Hegemony of the Car

Cars have been central to the promotion of economic growth since the early 20th century (Paterson, 2007: 92). This was evident in the uptake of Fordist and later post-Fordist modes of production (Rupert, 1995: 63), which entailed the introduction of mass-production and mass-consumption (Cox, 1993: 276; Forgacs, 1988: 275; Paterson, 2007: 106). Henry Ford envisioned a "universal car" and a partnership in which the 'owner, the employees and the buying public are all one and the same' (Ford and Crowther, 1926: 8-9, quoted in Rupert, 1995: 65). These can be seen as 'universalistic aspirations which typify hegemonic ideological projects' (Rupert, 1995: 65). The successful application of Fordism resulted in the wide uptake of cars first in the US and later in Europe, and increasingly on a wider international scale (Rupert, 1995: 63-4). Gramsci perceived Fordism as part of a complex historical bloc in which production was 'reciprocally conditioning and conditioned by a particular political framework, a particular culture, ideology, morality and behaviour' (Forgacs, 1988: 275). His observations on Fordism led Gramsci to conclude: 'Hegemony here is born in the factory and requires for its exercise only a minute quantity of professional political and ideological intermediaries' (Gramsci, 1971: 285). Gramsci's analysis of Fordism reflected upon the centrality of technology in shaping the organisation of political and civil societies and their ideologies (Cox, 1987: 313). The continued importance of the car industry in shaping modes of production is evident in the use of the term 'Toyotims' to describe post-Fordist lean production methods (Paterson, 2007: 110-111). The car, it can be seen, was instrumental in shaping modern capitalist societies, and practices of mass production and consumption that shaped both economic growth and environmental degradation.

The car's dominance as the preferred mode of transport was enabled by wide-ranging political support. Paterson (2007: 116) identified three main aspects of this: road building; neglect of other modes of transport; and fiscal measures that have 'effectively subsidised car use relative to other forms of transport'. This support is not

surprising, considering the economic importance of the car industry as 'the world's largest manufacturing sector' (Mikler, 2007: 1). A successful car industry was often seen as a prerequisite for economic development and growth and thus essential in 'the reproduction of capitalism as a system' (Paterson, 2000: 261-2). Political support for the car therefore 'helped to reproduce state power itself' (Paterson, 2007: 115), and promoted a 'growth-oriented political consensus' (Rupert, 1995: 59). In the EU, this was evident in national support and state aid for carmakers (as discussed in Chapter 2).

The hegemonic position of the car was secured through its dominance in civil society. This dominance has been noted by a growing number of scholars (inter alia Böhm et al, 2006; Paterson, 2007; Urry, 2004). In Urry's (2004: 28) view, the car is 'immensely flexible and wholly coercive'. It is flexible in that it facilitates individual freedom of movement, and coercive in the spatial organisation of car-societies that requires car ownership to facilitate freedom of movement. The car's prevalence in civil society has been described through the notions of 'autonomy' and 'mobility', or 'automobility' (Featherstone, 2004: 1-2). Automobility is constructed through an ideology promoting personal freedom of movement and progress, which legitimises the cars' 'principal technical artefacts' including road-building and car-use (Böhm et al, 2006: 3). Modern societies, it has been claimed, are locked into the 'automobility' provided by the 'steel-and-petroleum car', which is 'neither socially necessary nor inevitable but has seemed impossible to break from' (Urry, 2004: 27). The car has become

> [A] structural prerequisite for the organisation of everyday life, while at the same time the variety of forms of everyday actions becomes the structural prerequisite for the expansion of the automobile [...] the mobilisation of the self assures its own reproduction by creating social, spatiotemporal and technological conditions that restrict the genesis of any other mobility paradigms (Beckman, 2000: 595).

Car use emerged 'as a new human need [...] having nearly the same level of importance as other universals such as food, sex, sleep, and social interaction' (Rajan, 1996: 6). Thus, from a neo-Gramscian perspective, it can be seen that the car enjoys a hegemonic position in modern capitalist societies, to the extent that Urry (2004: 27) referred to the 20th century as the 'century of the car'.

Despite these important insights, the literature on automobility has not succeeded in theorising the complex social and political relations that shape these processes. In particular, there is a need to understand that 'automobility is fundamentally political – that it entails patterns of power relations and visions of a collective "good life" which are at the same time highly contestable and contested' (Böhm et al, 2006: 4). As Paterson (2007: 31) observes,

> [A]utomobility is principally an economic form obsessed with accumulation and a political form of subjectivity constructed around mobility which structures environmental degradation.

From this statement, it can be seen that the dominance of the car is secured through economic, political and social practices. Therefore, a neo-Gramscian perspective is a suitable contender for explaining the characteristics of automobility. However, as Paterson observes, the hegemonic position of the car is contested due to its environmental impacts, as discussed below.

Car Hegemony and the Threat of Climate Change

As noted above, while car-use helped reproduce capitalist structures, it also resulted in increasing environmental degradation (Paterson, 2000: 257; 2007: 92). In particular, rising car CO_2 emissions and their effect on global climate change have occupied the EU's environmental policy agenda since the early 1990s, when international awareness of the problem of global climate change grew. Climate change posed a threat to the operations of the car and oil industries, as Newell and Paterson (1998: 682) note:

> When the centrality of fossil fuels in producing global warming is combined with the centrality of (fossil) energy in industrial economies, it becomes clear that the fundamental interests of major sectors of those economies are threatened by proposal to limit greenhouse gas emissions.

Thus, the hegemonic position of the car was threatened by calls for climate-change mitigation and by increasing pressure for reductions of CO_2 emissions.

Employing a neo-Gramscian perspective, David Levy and Daniel Egan (2003) examined the responses of US and European car and oil companies to the threat of climate change in the 1990s. They employed the Gramscian notions presented above to analyse corporate environmental strategies. The authors noted a shift in firms' responses

to the threat of climate change. Initially, business groups on both sides of the Atlantic, but especially in the US, contested the need for action to reduce GHG emissions. Carmakers formed alliances with other economic interest groups such as the Global Climate Coalition, challenged the science of climate change, and invested large sums of money in studies and campaigns refuting the problem of climate change (Levy and Egan, 2003: 815-817). Their strategy was perceived as a war of position on the material, organisational and discursive levels to maintain their economic dominance (Levy and Egan, 2003: 812). Following the agreement on the Kyoto Protocol in 1997, industry groups adopted a more accommodating approach, or a 'passive revolution' (Levy and Egan, 2003: 817). On the organisational level, companies formed alliances with other groups, including environmental NGOs, advocating a 'climate compromise' (p. 822). On the material level, the car industry (especially in Europe) invested in low-carbon technologies. A series of mergers and alliances among carmakers and with oil companies and low-carbon industries also occurred, 'reshaping the economic structure of these industries' (Levy and Egan, 2003: 821). Discursively, the win-win ecological modernisation paradigm prevailed (p. 821). This strategy accommodated competing environmental interests, but ensured the continued dominance of the car industry.

Levy and Egan's (2003) analysis provides a useful reference point for this thesis, which tests the applicability of a neo-Gramscian perspective to understanding the governance of car CO_2 emissions in the EU between 1990 and 2009. This thesis explores the usefulness of the Gramscian concepts of hegemony, the historical bloc, passive revolution and war of position to understanding the policy process of the ACEA agreement, from its initiation in the early 1990s through the policy instrument choice, design, implementation and reformulation of the voluntary agreement. Chapters 5 to 7 provide an empirical account of this policy process, while Chapter 8 evaluates the usefulness of a neo-Gramscian approach in explaining this policy instrument cycle. The theoretical analysis of this thesis thus begins with the assumption that the car historically enjoyed a hegemonic position in European society. As discussed above, this hegemony was challenged through growing awareness of the problem of climate change. The theoretical analysis in Chapter 8 therefore explores how economic, political, social and environmental actors interacting in the historical bloc governing the

car shaped its governance. It applies the concepts of passive revolution and war of position to examine the strategies of carmakers and environmental NGOs, respectively. It further examines changes in the material, organisational and discursive practices that shaped this historical bloc. This thesis therefore widens the analysis provided by Levy and Egan (2003), by attempting to better address the role of economic, social, political and environmental actors in shaping EU car-CO_2 governance, and by explaining the complex interdependencies and contradictory relations among these actors.

In summary, a neo-Gramscian perspective can offer some important understandings of the governance of the car. It potentially sheds light on the deeply rooted hegemony of the car in European society and the interdependencies among economic, societal, environmental and political policy actors. These actors are constantly engaged in a process of contestation and compromise with one another. The remainder of this thesis seeks to examine how these processes of contestation and compromise might have shaped the employment of policy instruments to address EU car-CO_2 governance.

Conclusions

This chapter examined the possible contribution of a neo-Gramscian political economy perspective to understanding EU car governance. The chapter began with a brief discussion of alternative theoretical approaches to understanding the complex and contested relations that shaped EU car governance. It was claimed that although multi-level and network governance approaches go some way towards describing these complexities, they do not adequately explain how EU governance is shaped through the unequal distribution of power between public and private policy actors across multiple spatial scales. The chapter then examined the explanatory power of political economy approaches in explaining these complexities. A critical neo-Gramscian political economy approach was identified as a possible candidate for explaining the relations between public and private policy actors, and how these shaped EU governance.

A neo-Gramscian perspective was then introduced. Based on Gramsci's notions of hegemony, the historical bloc, passive revolution and war of position, this perspective illuminates the interactions among economic, social and political groups at material, organisational and discursive levels of analysis. While this approach takes for granted the dominance of economic actors, it sets up the basic tensions among various policy actors, by emphasising the importance of other social and political groups in shaping governance arrangements. Neo-Gramscian perspectives on EU governance were then outlined. Originating from IPE, these approaches perceive the EU as a neo-liberal historical bloc dominated by a transnational capitalist class, advocating "market-friendly" policy instruments. Similarly, neo-Gramscian approaches to environmental governance take the hegemony of the neo-liberal bloc as the starting point for their analysis. In this view, market-based NEPIs reflect the dominance of transnational corporations in shaping 'neo-liberal environmentalism'. Economic groups, however, are engaged in processes of contestation and compromise with environmental groups that challenge their hegemonic position.

The neo-Gramscian perspective was then preliminarily applied to understanding car governance. The hegemonic position of the car in capitalist societies was depicted. This position was enshrined through the economic strength of the car industry, wide reliance on the car within civil society, and political support. However, growing concerns with global climate change posed a threat to the hegemony of the car. Following Levy and Egan (2003), it was argued that car and oil companies were initially engaged in a 'war of position' in which they attempted to ward off climate action. However, following the agreement on the Kyoto protocol in 1997 the bloc was reconfigured to make some concessions to environmental concerns. This constituted a 'passive revolution' that maintained the dominance of economic actors. Building on these insights, the remainder of this thesis explores to what extent a neo-Gramscian approach can contribute to understanding how relations among various policy actors shaped EU car governance. In particular, it seeks to explore whether the hegemony of the car in the EU was maintained in light of growing concerns about global climate change, whether changes occurred in the historical bloc governing car CO_2 emissions, and if so, how these changes were shaped by processes of passive revolution and war of

position among various policy actors. These questions are empirically addressed in Chapters 5 to 7, and theoretically evaluated in Chapters 8 and 9. The following chapter outlines the methodology employed by this thesis.

Chapter 4
Methodology

Introduction

The aim of this thesis, as stated in Chapter 1, is to evaluate the usefulness of a neo-Gramscian perspective in explaining the policy cycle of the ACEA agreement. In order to pursue this aim, there is a need to construct a methodological framework that will inform the empirical and theoretical analysis of this thesis. This chapter introduces the methodological framework of this thesis.

The chapter continues by introducing the research philosophy guiding neo-Gramscian perspectives. It then explains the research design of this thesis. From the above-stated aim, it is possible to appreciate that a qualitative, single case study research design is the most appropriate scheme for this thesis. The data collection stage is then discussed. The choice of documentary data resources and their collection through the internet are explained, and criteria for evaluating these resources are outlined. Following this, the chapter examines how the data were analysed through a process-tracing method. Finally, the chapter provides some criteria for assessing the quality of qualitative research, and critically reflects on this research. It is argued that while most criteria for ensuring the credibility of the research were met, research in general cannot be seen as objective, since it is constructed through the interpretation of data and theory (Seale, 2004: 81). Thus, rather than providing an objective account of reality, a neo-Gramscian perspective offers a possible explanation.

The Research Philosophy: Neo-Gramscian Critical Political Economy

Ontological and epistemological assumptions underpinning any research philosophy are 'integral to and inform methodology' (D'Cruz, 2001: 18). Therefore, it is prudent to discuss these matters here. As explored in detail in Chapter 3, this thesis sets out to examine the possible contribution of a critical neo-Gramscian political economy perspective to understanding the ACEA agreement. Critical scholars 'understand that if

politics is power, then political science involves the study of the processes and consequences of the way power is acquired, distributed, and exercised' (Manners, 2006: 77-78). Theory therefore cannot be 'divorced from a standpoint in time and space', but 'is always *for* someone and *for* some purpose' (Cox, 1981: 87, emphasis in original). A neo-Gramscian, historical materialist perspective is said to provide 'an ontological and epistemological foundation upon which to constructs a non-deterministic yet structurally grounded explanation of change' (Germain and Kenny, 1998: 5).

A historical materialist, neo-Gramscian ontology recognises that there is a reality independent of social construction, but that this reality can nonetheless never be known. This perspective is encapsulated by Gill (1993: 27):

> Of course we can accept that there is a certain intransigent "reality" to society and nature (which we can never fully know or explain because of its scale and complexity). Therefore, this reality is to a certain extent independent of, but none the less interdependent with, the processes of knowledge production. Further, the "truth" of social reality is made more intractable because it involves the thought and inter-subjective meanings of individuals who have different forms of self-consciousness and awareness as to the social nature of their action/inaction.

Reality, as seen by Gramsci, 'is a product of the application of human will to the society of things' (Gramsci, 1971: 171, see also Rupert, 1993: 77). Gramscian ontology promotes an understanding in which 'humans are actively self-constitutive in the process of consciously reconstructing their internal relations with society and nature' (Rupert, 1993: 77). Marxist and Gramscian critical perspectives are concerned 'not only with theory and evidence, but also with transformation' (Davies, 2011: 137). Thus, 'producing reality […] entails the historical transformation of human beings and their social lives, as well as nature' (Rupert, 1993: 77-78). A neo-Gramscian ontology therefore suggests an 'identity of subject and object' (Cox, 1985: 52); 'The objective realities that this approach encompasses – the state, social classes, the conflict groups […] and their practices – are constituted by inter-subjective ideas' (ibid.). Society can therefore be seen as 'a totality of systems which is regulated or conditioned by structural relations' (Gill, 1993: 28-9). Neo-Gramscian ontology therefore investigates the complexities that exist between state and civil society, and addresses the distribution of power and ideology in a given political system (Worth, 2011: 375).

Consequently, a historical materialist epistemology suggests that the social scientist is confronted with a "second order reality" which is constructed through the actions of its participants (Gill, 2003b: 15). This epistemology is 'based on a dialectic understanding of reality as a dynamic totality and as a unity of opposites' (van Apeldoorn et al., 2003: 33). This dialectic can be understood as

> [T]he knowledge that each assertion concerning reality contains implicitly its opposite and that both assertion and opposite are not mutually exclusive but share some measure of the truth sought, a truth, moreover, that is always in motion, never to be encapsulated in some definitive form (Cox, 1981: 85).

A neo-Gramscian perspective therefore 'does not make claims about the "truth" of social reality' (Horn, 2008: 17). Rather, it seeks to understand dialectical processes of 'resolution of historical contradictions' which involve 'an ongoing struggle amongst competing ideological hypotheses and theoretical and political projects' (Gill, 2003b: 16). This perspective 'does not envisage any general or universally valid law which can be explained by the development of appropriate generally applicable theories' (Cox, 1985: 53, see also Morton, 2003: 133). Rather, it 'transcends rigid theories of causality and moves towards a reflexive and dynamic form of political economy *explanation*' (Gill, 1993: 26, emphasis in original). Thus, a neo-Gramscian perspective does not claim to offer a causal account, but is rather concerned with providing a critical political economy explanation of social and political processes.

Neo-Gramscian scholars follow Marx's method of abstraction (Gill, 1993: 28; Horn 2008: 17). This implies the 'endless process of the generation of abstractions and concepts, which are reconstructed and refined as they encounter a mass of data' (Gill, 1993: 28). Van Apeldoorn and his colleagues (2003: 33) explain the method of abstraction aptly:

> [I]t is not possible to apply ceteris paribus assumptions and to isolate and treat all but selected dependent and independent variables as constant. Instead, a more holistic, multidimensional, and overdetermined conception of the constituent processes of social reality is accepted as inevitable. Abstraction in this context means "the activity of identifying particular constituents and their effects," and it implies careful analytical reconstruction that, in thought, identifies particular determinants and their interrelations. This is an activity that is fraught with difficulty and that hardly can be truly objective.

Since analytical abstractions are in themselves historically specific constructions, the reconstruction of processes

> [D]oes not generate statements of universal validity, but rather shows the dialectical, that is, interrelated and mutually constitutive, nature of structure and agency, and points to contradictions in social power relations (Horn, 2008: 17).

Nonetheless, through the concepts of hegemony, the historical bloc, passive revolution and war of position introduced in Chapter 3, a neo-Gramscian perspective offers a novel way of understanding social relations (Germain and Kenny, 1998: 6). As argued in Chapter 3, this approach offers a possible understanding of the complexities of governance processes, as seen through policy instruments, which are not well explained by other theoretical perspectives. In order to test this theory, a case study research methodology was employed, as discussed below.

Firstly, however, it is perhaps prudent to state here my position as a researcher. As suggested by Creswell (1998: 202), it is important from the outset of the research to clarify researcher bias 'so that the reader understands the researcher's position and any biases or assumptions that impact the inquiry'. Having been a student of environmental sciences for over 8 years, I am guided by a deep concern for the state of the environment, and the impact of human activities on the natural world. In some respects, I identify myself with the 'green radicalism' discourse outlined by Dryzek (2005: 203). Green radicalism 'is about political change targeted at social structures and institutions as well as consciousness change' (ibid.). Thus, in understanding the contradictions inherent in EU car CO_2 governance, as seen through the policy process of the ACEA agreement, and the processes of contestation and compromise among various policy actors, I hoped to promote my understanding of how social, economic and political change can be brought about in order to protect the natural world from the impacts of human activities and economic developments. Despite this 'green' orientation, I aspired to provide a balanced account of the policy process of the ACEA agreement.

Research Design: The Case Study of the ACEA Agreement

From the above, it can be discerned that a qualitative research method is most appropriate for applying a neo-Gramscian perspective to the study of the ACEA agreement (Horn, 2008: 17), for several reasons. Firstly, qualitative research aims to understand the behaviour, attitudes and beliefs of the research objects. Secondly, qualitative research places an emphasis on description and context, in order to understand the behaviour of different actors in the research settings. Thirdly, in qualitative research, the case study is viewed 'in terms of unfolding processes so that events are depicted as interconnected over time' (Becker and Bryman, 2004: 92). Fourthly, the flexibility of qualitative data analysis means that unexpected events and findings could be explored in detail (ibid.). Qualitative data analysis is therefore suitable for exploring the aims and objectives of this thesis, as outlined in Chapter 1.

A single case study method was deemed as the most appropriate empirical approach to pursue the aims and objectives of this thesis. This method can be described as a 'sample of one' event at one point in time (Pierce, 2008: 51). As such, it is 'the detailed examination of an aspect of a historical episode to develop or test historical explanations' (George and Bennett, 2005: 5). A case study approach offers an in-depth analysis of the 'complexity and particular nature of the case in question' (Bryman, 2008: 52). It can be seen as an 'intensive study of a single unit with an aim to generalize across a larger set of units' (Gerring, 2004: 341). However, this conception is contested, as many scholars question the generalisability (or external validity) of single case studies (see e.g. Bryman, 2008: 55; Pierce, 2008: 53-54 for discussion on this). In contrast, Flyvbjerg (2006: 228) argues that

> One can often generalize on the basis of a single case, and the case study may be central to scientific development via generalization as supplement or alternative to other methods. But formal generalization is overvalued as a source of scientific development, whereas "the force of example" is underestimated.

In single case research, the main concern is therefore 'the quality of the theoretical reasoning in which the case researcher engages' (Bryman, 2008: 57). This observation fits with the aim of this thesis to test a neo-Gramscian theoretical perspective, utilising the case study of the ACEA agreement.

The case study of the ACEA agreement was chosen for several reasons. Firstly, it was one of a few high-profile flagship voluntary agreements adopted at the EU-level. Despite the wide advocacy of voluntary agreements, the EU only adopted a small number of these agreements. Therefore, it was hoped that a neo-Gramscian perspective could explain the reasons for its employment. Secondly, the targets of the agreement were not met. It was hoped that a neo-Gramscian perspective could provide some original insights into the reasons for the agreement's failure. Thirdly, the governance of car CO_2 emissions, as illustrated throughout this thesis, is a complex problem involving a range of public and private policy actors. Therefore, it was identified as a promising case study for the application of a neo-Gramscian perspective. Fourthly, at the time this research began in October 2007, the EU was amidst debates about the reformulation of the voluntary agreement, and the introduction of mandatory legislation (as discussed in Chapter 7). Therefore, it was hoped that the study of the completed policy cycle of the ACEA agreement would provide a timely, original contribution to existing knowledge.

The ACEA agreement can therefore be seen as a unique case study (Bryman, 2008: 55-6). Unique case studies

> [R]eveal more information because they activate more actors and more basic mechanisms in the situation studied. In addition […] it is often more important to clarify the deeper causes behind a given problem and its consequences than to describe the symptoms of the problem and how frequently they occur (Flyvbjerg, 2006: 229).

Thus, the ACEA agreement provided a unique opportunity for applying a neo-Gramscian perspective. The neo-Gramscian perspective in turn promised to shed light on the complexities inherent in the policy process of the ACEA agreement.

So far, this chapter has argued that neo-Gramscian ontology and epistemology promote an explanation of the dialectic relations between various policy actors, and how these conflicts of interests are resolved through material and ideological practices. A qualitative case study method was identified as an appropriate approach to explaining these processes, as seen in the unique case study of the ACEA agreement. The following section examines the data collection methods of this research.

Exploring the ACEA Agreement: Data Collection

In order to study the ACEA agreement, this thesis relied on documentary sources. The different stages of the ACEA agreement were well documented by scholars (e.g. Keay-Bright, 2000; 2001 and ten Brink, 2010) as well as the EU institutions, and especially the Commission, environmental NGOs, and the mass media. Therefore, sufficient data could be collected and triangulated using these resources, in order to construct a comprehensive empirical account of the ACEA agreement.

Documentary analysis has become increasingly popular in political studies, due to the rising availability of data resources (Harrison and Martin, 2001: 127), especially since the advent of the internet. As Travers (2001: 5) notes, 'qualitative researchers have always known that one can learn a lot about the world by looking at documents'. A careful examination of 'a wide range of documentary material is one of the most reliable methods open to the political researcher and provides an opportunity for the production of authoritative studies' (Burnham et al., 2008: 212). Thus, documentary analysis is 'an important research tool in its own right' (Macdonald, 2001: 194). This section continues by examining the documentary sources utilised in this research, and provides a classification of these. It then discusses their collection through internet resources. Finally, the section provides an assessment of these various documentary sources.

Documentary Sources

The use of documents in political research holds some possible advantages and disadvantages. Documents are unobtrusive non-reactive sources of data which have not been created for the purpose of the research, and therefore are not influenced by the researcher (Bryman, 2008: 515; Robson, 2011: 348-9). As Harrison (2001: 106) notes, 'In order to answer a political research question, it may be more appropriate to analyse data which already exist, rather than collect new information'. Documentary evidence is useful in the construction of a chronological timeline, and understanding the historical context in which the research takes place (ibid.). Documents hold

> [T]he potential to inform and structure the decisions which people make on a daily and longer-term basis; they also constitute particular readings of social events. They tell us

> about the aspirations and intentions of the periods to which they refer and describe places and social relationships at a time when we may not have been born, or were simply not present (May, 2011: 192).

Thus, they can illuminate our understanding of specific case studies, such as the ACEA agreement, particularly with reference to the neo-Gramscian framework outlined in Chapter 3.

However, documents are not neutral sources (Harrison and Martin, 2001: 124). 'What people decide to record is itself informed by decisions which, in turn, relate to the social, political and economic environments of which they are part' (May, 2011: 199). Two main shortcomings are outlined by Harrison and Martin (2001: 124-125). Firstly, documents are selective in terms of the information they present. Therefore, they may be 'interesting for what they leave out, as well as what they contain. They do not simply reflect, but also construct social reality and versions of events' (May, 2011: 199). Secondly, their non-reactive nature allows 'little, if any, opportunity for interaction between the investigator and the subject being studied – we cannot "travel back in time" to experience an event' (Harrison and Martin, 2001: 125). Documentary evidence therefore needs to be treated with caution, by asking who prepared the documents; for what purpose; who was the target audience; and who could have "corrected" records before they were finalized (Pierce, 2008: 82). A classification of documentary sources is perhaps a first step towards answering these questions.

Different categorisations of documentary sources exist in the literature. While some scholars consider all documents that have not been directly collected by the researcher as secondary data (Robson, 2011: 358-359), this view is contested. Crudely, a distinction is made between primary data, which is 'original, unedited and "first-hand"', and secondary data, which is '"second hand", edited and interpreted material' (Pierce, 2008: 80). Primary sources are further 'considered to be documents that reflect a position of an actor and do not have analysis in them' (Vromen, 2010: 262). This distinction is, however, blurry (Bryman, 2008: 296). According to Harrison (2001: 107) the distinction between primary and secondary data sources 'does not necessarily lie in "what they are" but in "what we do with them"'. Thus, 'the qualitative use of texts and documentary primary sources is to make meaning from them by using them to "tell the

story" or recreate a historical sequencing of events' (Vromen, 2010: 262). Vromen (2010: 261) suggests a definition of primary data sources as: 'original documents produced by political actors ranging from executive, parliamentary or judicial arms of governments, policy-making agencies or non-government organizations'. However, while these documents reflect the position of various policy actors, they contain a certain degree of analysis. Thus, categorising documents into primary and secondary sources does not 'neatly accommodate all types of documents' (Burnham et al., 2008: 188).

Instead, this thesis follows the categorisation of documents employed by Scott (1990: 13-18). Scott suggested a classification based on a distinction between personal and official (or public) authorship, and according to access to these resources. Personal documents include letters, diaries and other accounts whose authorship is 'outside the public sphere' (Scott, 1990: 15). These documents are not used in this thesis, and therefore not discussed in more detail here. Officially-authored documents are divided into those produced by private actors, such as business groups, environmental NGOs and the mass media, and those produced by public actors, including governmental authorities at various spatial scales. These documents range in their degree of accessibility, from closed, through restricted, open-archived, and open-published resources. This research relied on public and private open - archived and open-published - documents as outlined in Table 4.1. Before assessing the quality of these documents, the next sub-section examines how these documents were collected.

Public Documents	**Private Documents**
• Regulations, Directives, Communications and Recommendations from the EU institutions • SEC documents • EU Impact assessments • European Parliament Resolutions • Minutes of meetings of the Council of Ministers • Proceedings of official working groups • Press releases from the EU institutions • Speeches by EU officials • Documents from Member State institutions	• Studies, reports and press releases from the car industry • Studies, reports and press releases from environmental NGOs • Reports from private investment groups • Input from consumer groups • Responses of private stakeholders to public consultations • Academic studies • Manual of EU Environmental policy • ENDS reports • European Voice articles • Euractiv articles • Newspaper articles • Internet sources

Table 4.1: Public and private documentary sources used in the thesis

Source: Scott (1990: 14)

Data Collection

This research began by identifying key events in the policy process of the ACEA agreement through the process-tracing method discussed below. In order to carry out this task, a mix of public and private data sources was used. The initial investigation included identifying the main EU policy documents on the matter, and constructing a rough time outline based on secondary sources such as Haigh's *Manual of Environmental Policy* (Haigh, 2003), the *ENDS Report* series, and the *Ends Europe Daily* publications. Following this initial process tracing, a more in-depth documentary search ensued. This included obtaining further data from the EU institutions, documents from carmakers, environmental NGOs, mass media and academic research.

Data on the early stages of the ACEA agreement (1990-1998) was obtained from a variety of sources. Key EU policy documents, the ENDS Reports and the Manual of Environmental policy provided useful resources for outlining the policy choice and design stages of the voluntary agreement. In addition, research conducted by Sarah Keay-Bright (2000; 2001), as well as other academic studies provided useful data on the early stages of the voluntary agreement. The availability of data resources

increased for the later stages of the voluntary agreement. From 1998 onwards, the availability and range of data on the implementation and reformulation of the ACEA agreement significantly increased. Documents from the EU, the car industry, environmental NGOs, and other resources listed above became more widely available for analysis due to the advent of the internet (Vromen, 2010: 262).

A significant proportion of the data collected for this research was obtained via the internet, saving resources on lengthy archive searches (Harrison and Martin, 2001: 127). Most relevant EU documents, including Communications from the Commission, Regulations, Commission working papers, European Parliament resolutions, minutes of Council meetings etc. were available on the internet, either directly from the relevant EU institutions, through the search engine EUR-Lex, or through academic archives such as the University of Pittsburgh Archive of European Integration. Similarly, resources from other policy actors were widely available on the internet. Publications, studies and press releases from carmakers, environmental NGOs and consumer groups became increasingly accessible.

There is, however, a need for caution when collecting data from these resources. Private actors, such as environmental NGOs and carmakers, may 'systematically and deliberately distort and exaggerate facts' in order to promote their interests (Dochartaigh, 2002: 201). Internet data from these sources are problematic since

> [T]hey often give only one side of a story, in many cases distorting or brushing over the main arguments of their opponents. There is one simple and obvious way to correct this imbalance: get the other side of the story (Dochartaigh, 2002: 201).

While the reliability and validity of these resources may be questioned (Burnham et al., 2008: 215), they provided a useful means of documenting contestation and compromise between public and private policy actors that shaped the policy process of the ACEA agreement. Wherever possible, this research collected and analysed information from the relevant policy actors identified in Chapter 2, in order to provide a balanced account, and triangulate the data.

However, due to issues of data quality (discussed below) various documentary sources were omitted from this research. For example, data from individual carmakers,

non-environmental NGOs such as Corporate Europe Observatory, various internet sources, such as websites specialising in cars, and to a certain extent mass-media reports were discarded. There was therefore a tradeoff between the quality of the data collected and the breadth of information that was obtained. This tradeoff ensured that the empirical findings and the conclusions later drawn were based on reliable data sources, although some information that could not be triangulated was omitted from this research. Therefore, the researcher should adopt a revisionist perspective. That is, she must 'be prepared to revise existing interpretations when new evidence and compelling new interpretations emerge' (George and Bennett, 2005: 99).

Assessing Documentary Sources

Scott (1990, Chapter 2) suggests four criteria for assessing the quality of documents, which 'highlight the methodological features of documentary research' (ibid., p. 19). Firstly, the authenticity of a document asks whether the evidence is genuine and from an unquestionable origin (Bryman, 2008: 516). In terms of authenticity, official documents from public actors are most likely to adhere to this criterion, while reports from private actors rank second, mass-media accounts come third and internet resources last (see Bryman, 2008: 521-525). For this reason, this research relied in the first instance on public documents, such as official documents from the EU institutions, and only in the last instance on mass-media and internet resources. By only collecting data from recognized public and private actors, this research therefore avoided issues of authenticity related to internet-use (Burnham et al., 2008: 214).

The second criterion for evaluating documents is credibility. Here the question is raised as to whether the evidence presented in the document is error-free and undistorted (Bryman, 2008: 516). In answering this question, we need to ask 'are the people who record the information reliable in their translations of the information that they receive? How accurate were their observations and records?' (May, 2011: 207). In order to answer these questions 'we may employ other sources on the life and political sympathies of the author. This will enable the researcher to establish the social and political context in which the document was produced' (May, 2011: 207-208). For example, Said (2004: 420-1, in May, 2011: 199) asserts that

> You should always assume that officials representing a position, administrators, people who have authority and power over others, et cetera, are all involved in keeping their places and their authority intact.

The same can be held true for private policy actors who are engaged in a process of contestation and compromise with other groups. For example, carmakers may distort facts to suit their economic interests, while environmental NGOs may distort the same facts to promote environmental interests. The examination of credibility therefore raises questions of whether documents are biased. Conversely, these documents 'can be interesting precisely because of the biases they reveal' (Bryman, 2008: 521). Documents can provide 'essential evidence of the attitudes and experiences of the author and those who share his or her situation' (Scott, 1990: 24). Thus, they can reveal the interests and power relations among various actors.

Thirdly, the representativeness of documents involves a consideration of whether 'the documents consulted are representative of the totality of relevant documents' (Scott, 1990: 24). The importance of this matter depends on the research aims, as untypical documents may be of interests to the researcher just as much as more 'typical' documents (Harrison and Martin, 2001: 132; May, 2011: 208). Therefore May suggests that 'we should not become too obsessed with this issue' (May, 2011: 208). Although good research can be carried out with an unrepresentative sample of documents, the researcher must know 'to what extent and in what respects those documents are unrepresentative' (Scott, 1990: 24). In order to ensure a representative sample of documents, this thesis examined documents from various sources. For example, an event documented in official EU documents was compared to press releases from environmental NGOs and carmakers, as well as accounts in the media. Through comparing these documents, a more representative account could be constructed. Further, as Bryman (2008: 521) notes, the matter of representativeness is not as important in qualitative research, 'because no case can be representative in a statistical sense'.

Fourthly, the meaning of a document, that is, whether the evidence presented is clear and understandable needs to be assessed (Bryman, 2008: 516). According to Scott (1990: 28), the ultimate purpose of examining documents 'is to arrive at an

understanding of the meaning and significance of what the document contains'. Scott distinguishes between literal and interpretative meaning. In terms of literal meaning, the documentary evidence used by this thesis was mostly clear and comprehensible, regardless of the source it originated from. It therefore provided a clear "face value" meaning (Scott, 1990: 30). However, different meanings can be assigned to different documents with an emphasis on the target audience (Harrison and Martin, 2001: 132). Therefore, the interpretative meaning of a text 'cannot be separated from the questions of its production and its effects' (Scott, 1990: 35). A Communication from the Commission will have a different meaning than a report on the same issue from carmakers or environmental NGOs. This thesis therefore examined the meaning of various documents by asking who wrote these documents, what the target audience was, and how these documents contributed to the neo-Gramscian perspective of the researcher. By taking account of these criteria, a more holistic understanding of documentary sources was possible (Mogalakwe, 2006: 227). Still, the interpretative meaning of documents remains 'in a very real sense, a tentative and provisional judgment which must be constantly in need of revision as new discoveries and new problems force the researcher to reappraise the evidence' (Scott, 1990: 35).

Overall, the consideration of the above-mentioned criteria allowed for a quality-assessment of the various documentary sources used in this thesis. Furthermore, from examination of these criteria, it can be concluded that documents need to be critically understood through

> [Q]uestioning why the document was produced, what is being said (overtly and covertly) and what is not being said. Furthermore, we need to be aware of the particular language used (and the meaning that lies behind it) and of the social relations that inform the different stages of history (Harrison and Martin, 2001: 130).

Thus, documents offer great opportunities for the development of 'novel accounts and interpretations of significant events' (Burnham et al., 2008: 208). A neo-Gramscian interpretation was provided by a critical content analysis of these documents, as discussed below.

Analysing the ACEA Agreement

The policy cycle of the ACEA agreement, as unmasked through a variety of documentary sources, was analysed through a process-tracing method. Process-tracing has been identified as an appropriate method for the study of single case studies (George and Bennett, 2005: 215). Briefly, process tracing can be seen as the 'qualitative analogue to time-series data analysis' (Stern and Druckman, 2000: 58). In this method, the researcher postulates a series of events that might lead to a set of outcomes. Historical records are then searched for evidence whether the postulated events occurred or not (ibid.). Process-tracing 'requires researchers to build a logical chain of evidence' in order to explain policy processes and outcomes (Betsill and Corell, 2001: 78). This method 'directs one to trace the process in a very specific, theoretically informed way' (Checkel, 2005: 5).

There are several conditions which are likely to produce a satisfactory single case-study process tracing accounts (Bennett and Elam, 2006: 459-460). Firstly, process tracing is most likely to be successful where a process can be traced from its beginning to end. Secondly, process tracing is most fruitfully employed where there is 'a continuous and theoretically based historical explanation of a case, in which each significant step toward the outcome is explained by reference to a theory' (George and Bennett, 2005: 30, see also Bennett and Elam, 2006: 460). Thirdly, 'each process tracing account suggests evidence that should be found if the account is true', thus this method is stronger where there is a strong link between theory and evidence (Bennett and Elam, 2006: 460). According to George and Bennett (2005: 215) process tracing is most suitable for explaining unique case studies where outcomes are not explained adequately by existing theories. Process-tracing therefore offers an 'opportunity to differentiate and enrich the general theory' (ibid.). Although process tracing can be a very time-consuming practice (Checkel, 2005: 6), it is a promising technique for furthering both empirical and theoretical understanding. For these reasons it was employed in the study of the ACEA agreement.

George and Bennett (2005: 210-211) distinguish between varieties of process-tracing, which can be applied to testing of different theories. For the purpose of testing

the neo-Gramscian theoretical framework a 'general explanation' variety of process-tracing was employed. In this variety,

> [T]he investigator constructs a general explanation rather than a detailed tracing of a causal process. The investigator may do this […] because an explanation couched at a higher level of generality and abstraction is preferred for the research objective. A decision to do so is consistent with the familiar practice in political science research of moving up the ladder of abstraction (George and Bennett, 2005: 211).

This observation holds true for the aim of this research to examine whether a neo-Gramscian perspective can contribute to understanding the ACEA agreement. As mentioned above, this perspective is concerned with a possible explanation of the ACEA agreement, rather than providing a causal account.

In order to inform the explanatory process-tracing, this thesis postulated some guiding questions which informed its analysis. Asking questions, Corbin and Strauss (2008: 72) concede, provides an analytical tool which can further theoretical and empirical conceptualisation. Corbin and Strauss identify four types of questions which can guide research. Sensitizing questions 'tune the researcher in to what the data might be indicating' (ibid.). These questions include who were the main actors involved in a given situation, how they defined the situation in question, and what their actions were. Theoretical questions are those that help the researcher see processes and connect between different concepts, as defined in the theoretical framework. Practical questions are those that 'provide directions for theoretical sampling' (ibid.). These questions help assess the strengths and weaknesses of the theory, and provide directions for theoretical improvement. Fourthly, Corbin and Strauss outline guiding questions that guide the analysis process. These questions and their application to the analysis of this thesis are summarised in Table 4.2. These questions guided the theoretical and empirical analyses of this thesis.

Sensitizing Questions	**Theoretical Questions**	**Practical Questions**	**Guiding Questions**
For a given process/situation: • Who were the main actors involved? • What were their interests? • What were the main arguments they made? • How did they frame these arguments discursively? • How did they interact with other actors? • Did the process allow for the inclusion of other actors? • What was the broader economic, political and environmental context in which these developments occurred? • What data cannot be observed?	• How can these developments be explained using the neo-Gramscian concepts of: ○ Hegemony ○ Historical bloc ○ War of position ○ Passive revolution • What developments do these concepts not aptly explain? • How can theoretical concepts be improved in accordance with empirical findings?	• Who wrote the document? • For whom? • For what purpose? • How can findings be compared and contrasted? • Are there other data sources that can strengthen findings? • Is there a need for other methods of data collection to strengthen these findings?	• What do these findings reveal about power relations among various policy actors? • What do these findings reveal about wider material, organisational and ideological practices?

Table 4.2: Guiding questions for the analysis of the ACEA agreement

Source: adapted from Corbin and Strauss (2008: 72).

Quality Control: Evaluating the Research

In the assessment of qualitative, Interpretivist research, questions of reliability and validity, common in the positivist tradition, gain a different meaning. The idea that reality cannot be known implicates different conceptions of quality (Seale, 2004: 75). Lincoln and Guba (1985) and Guba and Lincoln (1994) (in Bryman, 2008: 377) propose an alternative scheme for assessing the quality of qualitative research. Two primary criteria are suggested: *trustworthiness* and *authenticity*.

Trustworthiness is further comprised of four criteria which are parallel to considerations in quantitative research (Bryman, 2008: 377). Credibility is parallel to internal validity. It asks whether the findings of the research are believable (Corbin and Strauss, 2008: 301). The establishment of credibility entails ensuring the research is carried out according to 'the canons of good practice' (Bryman, 2008: 377). One means of ensuring trustworthiness is through triangulation. Data triangulation entails using more than one 'source of data in the study of social phenomena' (Bryman, 2008: 379, see also Seale, 2004: 77). As discussed above, this research relied on documentary data sources which provided a detailed account of the positions of various actors in shaping the ACEA agreement. The different sources of data were compared and contrasted in order to provide a credible account of the case study.

Transferability entails producing a detailed account, or thick description of the case study, so that other readers can make a judgement about its transferability (Bryman, 2008: 378). Another means of ensuring transferability is through theoretical generalisation – can the theory be applied to other case studies (Seale, 2004: 78). This thesis aimed to meet both of these criteria, so that the empirical analysis provided a useful account for readers interested in car CO_2 governance in the EU and elsewhere, and the theoretical perspective provided a framework for understanding other case studies, as discussed in Chapter 9.

The third criterion for assessing the trustworthiness of qualitative research is dependability. Dependability can be achieved through auditing the research process (Seale, 2004: 79). This approach entails ensuring that records are kept of all stages of

the research process so that these can be scrutinised by external auditors (Bryman, 2008: 379). Through providing an account of the methods used in this thesis, as outlined in this chapter, and through the use of correct referencing, this research should be open to external scrutiny.

The fourth criterion for establishing trustworthiness is confirmability. This criterion is set to examine the objectivity of the researcher, so that 'he or she has not overtly allowed personal values or theoretical inclinations manifestly to sway the conduct of the research and findings deriving from it' (Bryman, 2008: 379). This criterion, however, is more difficult to adhere to in interpretivist research, in which 'truth' is a matter of interpretation. As noted by Seale (2004: 81), the distinction between data and theory becomes blurred, as data are 'pre-constituted by the theories and values of the researcher so that they cannot be regarded as an objective account of reality' (Seale, 2004: 81). Or, as Corbin and Strauss argue, 'these criteria are directed more at the validity aspects of doing qualitative research rather than the creative'.

The authenticity of the research is concerned with its 'wider political impact' (Bryman, 2008: 379). In determining the authenticity of research, questions as to whether the research represented the viewpoint of different actors; whether it promoted an understanding of the phenomenon being studied; whether it promoted an educational understanding of the perspectives of different actors; whether it stimulated some form of action; and whether it empowered people to take action are asked (Bryman, 2008: 379-380; Seale, 2004: 81).

This research aimed to meet the first criterion of trustworthiness, through promoting an understanding of the positions of various actors involved in the policy process of the ACEA agreement, as well as a theoretical understanding of their positions, and hence an informed view of their actions, and an (as much as possible) objective empirical account. However, in order to ensure the authenticity of the research and its wider impact, the dissemination of the findings of this thesis is required.

Conclusions

This chapter introduced the methodological approach of this thesis. It began by outlining the underlying philosophical foundations of a neo-Gramscian theoretical approach. It was argued that neo-Gramscian ontology perceived reality as independent of human knowledge, but nonetheless this reality cannot be known. Thus, our understanding of reality is mediated through the interactions among actors and ideologies. Neo-Gramscian epistemology investigates the dialectical processes of contestation and compromise between actors with contradicting goals, and the mediation of these interactions through ideological practices. Thus, a neo-Gramscian perspective offers a critical political economy explanation rather than providing a theory of causation.

The research design was then outlined. A qualitative research strategy was identified as appropriate for the purpose of this research. In order to test the neo-Gramscian perspective, a single case study was deemed as an appropriate methodology. The case study of the ACEA agreement was chosen as a unique case study, which could provide both important empirical insights and theoretical contributions.

The data collection method was then discussed. This research relied on documentary data sources. A categorisation of these resources was introduced, and some of the strengths and weaknesses of using documentary sources were outlined. It was argued that documentary sources are useful in elucidating the positions of various policy actors in a non-obtrusive manner. Data collection was then discussed in more detail. Data was collected primarily through the use of the internet to access archived and open-access documents. Criteria for assessing the quality of documents were then introduced and applied to the documentary sources used in this thesis. It was shown that the examination of documents, and the biases they reveal provide interesting interpretations of the meanings various actors give to different situations. Thus, the analysis of documentary sources contributed to fulfilling the aims and objectives of this thesis.

Next, the data analysis stage was discussed in some detail. A process-tracing technique was identified as an appropriate means of guiding the empirical and theoretical analysis of this thesis. Process-tracing aimed at uncovering a general explanation was outlined as appropriate for informing the theoretical and empirical analysis, and providing a tool for 'moving up the ladder of abstraction'. Some questions that guided the analysis of this thesis were then outlined.

Finally, the chapter introduced criteria for evaluating qualitative research. These included trustworthiness and authenticity. These criteria were used to assess the quality of this research. The methodology and methods outlined in this chapter are used to inform the empirical analysis, which begins in the following chapter.

Chapter 5
Defining Policy Instruments to Govern Car CO_2 Emissions

Introduction

By the early 1990s, climate change became a prevalent problem on the EU's policy agenda (Jordan and Rayner, 2010: 55). The Inter-governmental Panel on Climate Change (IPCC) report published in 1990 signified an emerging consensus amongst scientist and policymakers as to the potential risks of climate change, and prompted the EU to take action on this matter (CEC, 1991: Article 1.1). A Community strategy to limit carbon dioxide emissions and improve energy efficiency was published in 1991 (CEC, 1991). The strategy singled out the transport sector as one of the main contributors to the EU's emissions of Greenhouse gases, and CO_2 emissions particularly. In this context, rising car CO_2 emissions necessitated an EU-wide policy intervention.

This chapter examines the EU's efforts to introduce policy instruments to reduce car CO_2 emissions, and specifically the choice and design of a voluntary agreement as the EU's main instrument to achieve this objective. From the early 1990s, the EU began searching for policy instruments that would be acceptable to the multitude of policy actors involved in its policymaking processes. In 1995, the Commission published a Community strategy to reduce CO_2 emissions from cars (CEC, 1995). The strategy was comprised of three pillars; a voluntary agreement with carmakers; a labelling scheme; and fiscal measures. The voluntary agreement was expected to result in the reductions of CO_2 emissions through technical, supply-side measures, and was considered to be the main pillar of the strategy. The labelling scheme and fiscal measures were meant to encourage demand for more fuel-efficient cars. From 1996 to 1998 the Commission conducted negotiations with the association of European carmakers (ACEA), which culminated in the signing of a voluntary agreement in 1998.

This chapter sets out to explore how the interactions among public and private policy actors shaped the choice and design stages of the voluntary agreement. It continues by examining the competing policy instrument for reducing CO_2 emissions

from cars, which were suggested by Member States, the car industry and the EU institutions in the early 1990s. It outlines the diverging interests behind these competing options. The events leading to the publication of the Community Strategy in 1995 are then examined. The negotiations which led to the signing of the voluntary agreement in 1998 are analysed, and the reactions of various policy actors to the ACEA agreement discussed. Through the examination of these events, the chapter aims to better understand how the choice and design stages of the ACEA agreement were shaped through processes of contestation and compromise among actors with conflicting interests. While this chapter examines the choice and design stages of the ACEA agreement, Chapter 6 examines the implementation of the voluntary agreement, and Chapter 7 examines its reformulation. These chapters provide the basis for the theoretical analysis that will be elaborated in Chapter 8.

Policy Instrument Choice: Initial Negotiations

Between 1991 and 1995, the EU institutions, Member States and the car industry were engaged in deliberations regarding the choice of appropriate policy instruments to reduce CO_2 emissions from cars. This section continues by first outlining the initial stages of these negotiations, between 1991 and 1992. It examines the competing policy instruments that were advocated by different policy actors. It then examines the political and economic context in which the choice of policy instruments to reduce CO_2 emissions from cars developed between 1993 and 1994. It illustrates that conflicting economic, political and environmental demands shaped the initial stages of policy instrument choice.

Competing Policy Instruments for Reducing CO_2 Emissions from Cars

The first calls for EU legislation on car-CO_2 emissions were made in Article 6 of the Small Car Directive (Council of the European Union, 1989). The Consolidated Directive, 91/441/EEC (Council of the European Union, 1991) then called the Environment Council to decide upon measures to curb CO_2 emissions from cars by the end of 1992. From the outset, it was assumed that the brunt of responsibility for

reducing car CO_2 emissions would fall on carmakers, and not on other stakeholders, including oil producers and motorists. This was evident in a speech given in November 1991 by UK Transport Secretary at the time, Malcolm Rifkind, to the UK Society of Motor Manufacturers and Traders (SMMT) (Sorrell, 1992: 766). Rifkind evaluated the different options for emissions reductions and claimed that limiting motorists' use of cars "hardly bears contemplating" and would have "truly horrendous" implications for personal freedom of movement. Since the development of alternative fuels was not feasible in the short term, carmakers were expected to achieve "massive improvements" in the fuel efficiency of new cars, without affecting motorists' demands for personal freedom of movement (ENDS Report, 202: 5).

In response, ACEA offered in 1991 to voluntarily reduce the CO_2 emissions of new cars sold by its members by 10% between 1993 and 2005 (CEC, 1995 Article 29). The advocacy of voluntary action by the car industry was emblematic of wider trends in corporate environmental governance, whereby business groups were seen as part of the solution to environmental degradation, rather than the problem (Levy, 2005: 31). This raison d'être was shared by policymakers. In 1992, the Commission published the 5th Environmental Action Programme, which featured a focus on sustainable development. The Programme acknowledged the unsustainable nature of the EU transport system, and predicted a steep increase in car ownership and use by the year 2000 (CEC, 1993, Chapter 1). In order to address this and other environmental problems, the Commission advocated the use of NEPIs, including voluntary and economic instruments (Weale, 2005: 130), and promoted the notion of 'shared responsibility' between public and private policy actors (Jordan et al., 2005: 325). The 5th Action Programme promoted the participation of business groups in environmental policymaking, and constituted 'a turning point for the use of NEPIs in the EU' (Jordan et al., 2005: 323), as discussed in Chapter 1. The EU's attempts to agree on policy instruments to reduce car CO_2 emissions must therefore be understood in this context.

Nonetheless, ACEA's offer was rejected by policymakers as insufficient for delivering the necessary reduction in CO_2 emissions (ENDS Report, 207: 29; 213: 36). Most policymakers believed the car industry could achieve cuts in CO_2 emissions of 40-

50% from 1990 levels by 2005 (Keay-Bright, 2001: 4). In 1992, a target of 120 g CO_2/km was suggested by the German and French Environment ministers, Klaus Toepfer and Segolene Royale (Keay-Bright, 2000: 34-5). Although this target was based on the old vehicle test cycle[5], it was much more ambitious than the target suggested by ACEA.

In order to comply with the requirements to introduce legislation, the Commission recruited the help of the Motor Vehicle Emissions Group (MVEG) (ENDS Report, 215: 35). The MVEG was an advisory body comprised of national and EU officials alongside representatives from the car and oil industries and NGOs (Arp, 1993: 162; Wurzel, 2002: 139). The group was prejudiced by economic and political interests, although these 'were often hidden behind technical arguments' (Wurzel, 2002: 138). While environmental and consumer groups were not excluded, it was difficult for them to participate in negotiations due to their lack of technical expertise (Arp, 1993: 163). Moreover, experts from the MVEG also participated in Council working groups, and were therefore instrumental in shaping EU policies on car emissions (Wurzel, 2002: 139).

By the end of 1992, Member States presented competing policy proposals to the MVEG. The UK Department of Transport recommended in 1991 a system of tradable permits as the UK's preferred policy instrument (Keay Bright, 2001: 3; Kågeson, 2005: 30). This proposal was seen as promoting the interests of the UK's diverse car industry, which was comprised of manufacturers of smaller cars, alongside manufacturers of bigger and luxury cars with higher fuel consumption, such as Jaguar and Range Rover (Keay-Bright, 2001: 2). Germany's proposal to the MVEG was based on differentiated emission standards according to engine size or car weight (ENDS Report 207: 29; Keay-Bright, 2001: 3). This proposal was criticised by the UK and other Member States for encouraging the uptake of larger cars, such as those produced in Germany (ENDS

[5] The new test cycle 93/116/EC replaced Directive 80/1268/EEC in 1993 (CEC, 1993b), and was meant to reflect real driving conditions. The procedure resulted in an average artificial increase of 9% in CO_2 emissions in comparison to the old test cycle, but was still criticised for not reflecting real driving conditions (Keay-Bright, 2000: 34-35).

Report, 207: 29; 215: 35). The French proposal combined a mixture of regulatory and fiscal incentives. Under this proposal, all cars sold in the EU had to comply with an absolute emissions limit. Further, each manufacturer or importer would have to meet average emissions targets. Companies exceeding this standard would be fined, while companies whose average emissions were below this standard would receive financial rewards (ENDS Report, 207: 29). The proposal favoured manufacturers of smaller, less polluting cars, such as those produced in France. Italy's proposal to the MVEG consisted of a variable purchase tax based on CO_2 emissions. Cars emitting less than 100 g CO_2/km in 1994 would be exempt from the tax. Cars emitting more than this baseline would be subjected to exponentially rising taxes. This proposal was also seen as favouring Italy's producers of smaller, less polluting cars (ENDS, 207: 29; 215: 35). The Dutch delegation to the MVEG proposed setting gradually strengthened emission standards based on a covenant-type approach. Standards would be based on vehicle weight or engine size, similar to the German proposal (Keay-Bright, 2000: 17). This reflected the interests of Dutch carmakers. These competing proposals illustrated the economic importance of the car industry in Member States, as well as the popularity of NEPIs for reducing car CO_2 emissions.

In an attempt to reconcile the competing interests of Member States, the Commission asked the MVEG to draft a compromise proposal (ENDS Report 215: 35). In November 1992, the MVEG recommended a weight-based, CO_2-linked purchase tax. A 40% reduction in CO_2 emissions was envisioned for 2005, so that cars emitting less than 110 g CO_2/km, which was considered the technological limit at the time, would be exempt from taxation on the registration of new cars (Keay-Bright, 2000: 18). The MVEG also considered an annual circulation tax based on CO_2 emissions (Keay-Bright, 2001: 3).

However, these proposals were met with resistance of both EU and national policymakers. Within the Commission, DG Environment was supportive of environmental taxes in general, while DG Industry preferred the circulation tax to the purchase tax, and DG Competition was strongly opposed to any fiscal framework (Keay Bright, 2000: 18). These preferences reflected upon the different interests promoted by

each DG. While DG Environment represented environmental interests, DG Industry represented those of industry (Arp, 1993: 162). DG Environment's support for fiscal measures was at least partially due to its attempts to gain influence within the Commission (Keay-Bright, 2000:6). DG Industry and DG Competition's objections can at least partially be explained by their attempts to protect the competitiveness of the European car industry. This internal divide within the Commission raised 'a competitive issue as to which DG would 'win' in the quest to introduce policy instruments to reduce car CO_2 emissions (Keay-Bright, 2000: 18).

Member States also objected proposals for fiscal measures. For example, the UK claimed that the MVEG lacked authority to discuss fiscal measures (ENDS Report 215: 35), and objected to it on grounds of subsidiarity (Keay-Bright, 2000: 18). The proposal for a circulation tax was rejected by the Environment Council in December 1992 (Keay-Bright, 2001: 4). This lack of sympathy for fiscal measures was emblematic of a wider opposition to environmental taxes, as seen in the EU's failure to adopt the Commission's proposed energy and CO_2 tax in 1992. The proposal for a carbon and energy tax was blocked due to 'national objections based on distributive and sovereignty arguments, as well as the institutional barriers limiting EU competence on taxation issues' (Hey, 2010: 212, see also Jordan and Rayner, 2010: 59). Fiscal measures required unanimous agreement in the Council of Ministers, and therefore were very difficult to implement at the EU-level.

In response to the MVEG's proposals for fiscal measures, ACEA proposed in 1992 a harmonised CO_2-based tax (ENDS Report 207: 29). ACEA demanded that the tax replace existing taxes, be solely CO_2-based, and would not penalise any particular market segments (Keay-Bright, 2001: 4). This proposal was problematic for several reasons. Firstly, a CO_2-based tax would inevitably penalise larger, more polluting cars. Secondly, removing other car taxes would affect efforts to address other environmental and social externalities, such as the emissions of conventional pollutants. Thirdly, a harmonised tax rate would entail agreement on the least ambitious, 'lowest common denominator' targets in order to secure agreement between Member States. Crucially, as

illustrated above, the EU was ill-equipped to secure agreement on fiscal measures (Keay-Bright, 2001: 4-5).

By the end of 1992, the deadline set in the Consolidated Directive for the proposal of measures to reduce car CO_2 emissions, agreement on policy measures to reduce car CO_2 emissions was still not in sight. There was general consensus amongst policymakers that measures to address the problem of climate change should be of a technical, supply-oriented nature. However, each car-producing Member State preferred (new) policy instruments that promoted the competitive advantage of its domestic car industry. Carmakers equally sought instruments that would not compromise their competitiveness, such as a voluntary agreement or fiscal measures. Although the MVEG supported fiscal measures, as a compromise between these competing interests, these were not attainable due to subsidiarity concerns and institutional barriers. These constraints pointed to Member States' attempts to promote their economic competitiveness. The EU's efforts to introduce policy instruments to reduce car CO_2 emissions continued.

Conflicting Economic and Environmental Pressures

By 1993, the European economy spiralled into an economic recession, which severely affected the competitiveness of the European car industry (Nieuwenhuis and Wells, 2000: 5). Car sales across the EU decreased by 16% between 1992 and 1993, due to an economic downturn in Germany and the EU, resulting in job losses in the car manufacturing and related industries (CEC, 1996b, Article 1.2.1). In order to address these economic difficulties, the Commission published a Communication on the competitiveness of the car industry in February 1994 (CEC, 1994). The Communication outlined the conflicting demands for economic growth, personal mobility and environmental protection. Article 2 of the Communication noted that 'the desire for personal mobility has to be set against the nuisance of pollution and traffic congestion'. However, rather than curbing demand for car use, the solution to this dilemma, according to the Commission, was the production of '"clean, lean-produced, intelligent, quality, value" cars for the year 2000 and beyond' (Article 3). Thus, the Commission promoted technological solutions that supported economic growth, employment, and

continued personal mobility. In this context, the Commission said it would introduce measures on reducing car CO_2 emissions in 1994 (Article 4v).

Meanwhile, the European Parliament called for action on reducing car CO_2 emissions. During negotiations on the EURO II and EURO III standards for conventional pollutants in 1993 (Wurzel, 2002: 155-6), the Parliament attempted to introduce specific measures on reducing CO_2 emissions (European Parliament, 1993). This move was objected to by the Environment Council. The proposed Directive (CEC, 1992b) entered the EU's first conciliation under the Cooperation procedure. Although the Cooperation procedure, agreed under the treaty of Maastricht, allocated more Treaty-based power to the European Parliament, Parliament's influence over EU policymaking was still limited. Due to heavy lobbying of carmakers, and threats from the Commission that 'legislation might fall altogether if Parliament failed to back it', Parliament retreated on its demands (ENDS Report, 230: 41). The agreed Directive (European Parliament and Council of the European Union, 1994) called on the Commission to introduce a policy proposal on car CO_2 emissions, but failed to introduce specific measures on this matter.

In December 1994, the Environment Council reiterated the calls for the introduction of measures to reduce car CO_2 emissions. The Council requested the Commission to investigate the possibility of reducing car CO_2 emissions to 120 g CO_2/km by 2005 (CEC, 1995: Article 1.5). These calls were made in light of the EU's climate commitments under the UNFCCC, and the lack of progress on reducing car CO_2 emissions (ten Brink, 2010: 181). The Environment Council's calls were supported by the European Parliament in 1995 (ten Brink, 2010: 181), and reiterated in the Environment Council meetings in March and June 1995 (Environment Council, 1995a, b). As this section illustrated, the increasing demands for action on car CO_2 emissions need to be understood in the context of the difficult economic climate in the EU, competition and disagreement between Member States and within the EU institutions. These pressures shaped the Commission's response to the demands to introduce policy measures on car CO_2 emissions, as discussed below.

The Community Strategy to Reduce Car CO_2 Emissions

The impasse in agreement on policy instruments to reduce car CO_2 emissions was finally broken in 1995, with the publication of the Community strategy to reduce CO_2 emissions from cars (CEC, 1995). This section continues by examining the events leading to the publication of the strategy in December 1995. It then outlines the initial responses of various policy actors to this strategy.

Towards a Community Strategy to Reduce CO_2 Emissions from Cars

Ahead of the first Convention of the Parties (COP1) of the UNFCCC in Berlin in 1995, Germany pledged to reduce its CO_2 emissions by 25% from 1995 levels by 2005. In order to achieve this target, Germany signed a voluntary agreement with the Federation of German Industries, in which German carmakers committed to voluntarily reduce the average CO_2 emissions of new cars by 25% from 1995 levels by 2005. The German government, in return, promised to postpone the introduction of mandatory climate change legislation (ENDS Report, 244: 3). Germany then called on the EU to adopt similar measures, in order to protect the competitiveness of its car industry (Levy and Egan 2003: 820).

In April 1995, the EU signed the Berlin mandate which called for setting quantified international emissions reductions targets after 2000. As a result, the Commission came under increasing pressure to propose policy measures to tackle car CO_2 emissions. However, an inter-Commission agreement proved difficult to reach, with each DG promoting different policy instruments. As mentioned above, DG Environment supported the introduction of fiscal measures, while DG Industry backed the uptake of a voluntary agreement (Keay-Bright, 2001: 5). Progress was made when DG Environment accepted the use of a voluntary agreement, as it realised that fiscal measures alone would not suffice for curbing CO_2 emissions from cars, and that returning to the drawing board would be a lengthy process (Keay-Bright, 2001: 5).

In December 1995, the Commission published the Community strategy to reduce CO_2 emissions from cars (CEC, 1995). The strategy comprised three pillars: a voluntary agreement with the car industry; a labelling scheme; and a fiscal framework.

The Commission proposed weakening the 120g CO_2/km target suggested by the Environment Council and the Parliament. It conceded that meeting this target was technically feasible (Article 10). However, it said that carmakers would need longer lead-in time, and that higher prices might affect consumer demand (Article 11). Therefore, the Commission suggested postponing the deadline for implementation past 2005, in order to 'facilitate the renewal of the model range without forcing a major downsizing of the vehicle fleet' (Article 12), and affecting consumer demand (Article 29). The Commission considered a reduction of 25% from 1990 levels by 2005, equating to about 140 g CO_2/km as a 'reasonable reference point' for the voluntary agreement (CEC, 1995: Article 34). The additional 10% were to be achieved through the remaining pillars of the strategy (Keay-Bright, 2000: 19). While the voluntary agreement was seen as a victory for DG Industry, the Community strategy was agreed due to the efforts of Environment Commissioner Ritt Bjerregaard, who initiated its drafting (Keay-Bright, 2001: 5).

The decision to employ a voluntary agreement was in large part a result of industry lobbying. As mentioned above, ACEA supported a voluntary agreement from the outset. According to Lenschow and Rottmann (2005: 8), ACEA suggested the idea of a voluntary agreement in bilateral talks with the Commission. At the same time, the Union of Industrial and Employers' Confederations of Europe (UNICE) lobbied the Commission to prepare a framework for EU-wide voluntary agreements (ENDS Report, 229: 38; 243: 42-3). It was no surprise that carmakers advocated the use of a 'softer' policy instrument (Bongaerts, 1999: 102). A voluntary agreement allowed carmakers more flexibility in implementation, and ultimately depended on their goodwill.

The Commission perceived the car industry's commitment to voluntary action as a sign of the industry's willingness to work together with public authorities in the 'spirit of shared responsibility' (CEC, 1995: Article 29). In light of the principles set out in the 5th EAP, both the Commission and the Environment Council were supportive of NEPIs in general and voluntary agreements in particular (Keay-Bright, 2000: 6). This enthusiasm, Keay-Bright (2000: 6) claims, might 'be an explanation as to why the pros and cons of alternative measures to regulate CO_2 from passenger cars were not more

fully investigated'. However, the eagerness of the Environment Council and the Commission to pursue a voluntary agreement weakened the negotiation position of the Commission against ACEA (Keay-Bright, 2000: 6), as discussed later in this chapter.

In summary, the Community strategy can be seen as a compromise accommodating the interests of various policy actors. It aimed to reconcile diverging interests of Member States, who could not agree on a policy instrument to reduce car CO_2 emissions (ENDS Report, 252: 37). Further, the support of the car industry, the Commission and the Environment Council for a voluntary approach meant that the Commission was provided with 'a politically supported policy instrument for regulating CO_2 from cars' (Keay-Bright, 2001: 5). The strategy also reconciled intra-Commission rivalries between DG Environment and Industry. Perhaps most importantly, the strategy aimed to ensure the cooperation of the car industry. It was agreed that the Commission had 'gone some way to accommodate industry demands not to push fuel efficiency improvements too fast' (ENDS Report, 252: 37). Further, the strategy stressed the importance of ensuring cars remained affordable to consumers. The 120 g CO_2/km target was thus weakened to accommodate these demands. The reaction of various policy actors to the Community strategy are examined below.

Initial Responses to the Community Strategy

Despite its support for a voluntary approach, ACEA was initially reluctant to accept an EU-wide agreement (Lenschow and Rottmann, 2005: 8). Some carmakers had already signed voluntary agreements at the national level, and considered an EU-wide agreement unnecessary (Bongardt and Kebeck 2006: 10; Keay-Bright, 2000: 20). For example, German and Swedish manufacturers agreed with their governments to a 25% reduction in CO_2 emissions by 2005, while French manufacturers were committed to 150 g CO_2/km by 2005 (Keay-Bright, 2000: 20). In light of the economic difficulties of the car industry, ACEA's Secretary-General, Camille Blum, said in January 1996 that any measures proposed by the Commission must "be placed in the context of the poor outlook for the economy and the industry". Blum warned that measures which increased costs for consumers would have a negative impact on the industry and the wider

economy, as consumers were "in the mood for cost-efficient purchases and not for increased prices" (Mann, 1996a).

Environmental NGOs objected to the voluntary agreement. The European Environment Bureau (EEB) voiced its opposition to EU-wide voluntary agreements and questioned their legitimacy, as the Commission could not apply sanctions to enforce these (Keay-Bright, 2000: 59). The European Federation for Transport and Environment (T&E) said that efforts to reduce CO_2 emissions of new cars were futile unless actions were taken to curb the rise in car-use. T&E advocated an increase in fuel taxes in order to support this objective (Mann, 1996b). Greenpeace adopted a more accommodating approach. It set out to demonstrate that deep emissions cuts were achievable with only relatively low costs. In 1996, Greenpeace launched the SMILE car (Small, Intelligent, Light, Efficient). A modified version of the Renault Twingo, it was almost twice as fuel-efficient as the original (Greenpeace, no date). The SMILE campaign reflected a shift amongst environmental NGOs towards 'solution campaigning' which highlighted practical solutions to environmental problems, rather than just arguing for tighter regulation (ENDS Report, 260: 20). This strategy can be contrasted with other, more confrontational efforts, such as anti-road protests in the UK (Dudley and Richardson, 2000: Chapter 8).

The EU institutions were divided in their reactions to the Community strategy. The Environment Council approved the strategy in June 1996. Ministers agreed that carmakers should reduce emissions to 120g CO_2/km (Environment Council, 1996; ten Brink, 2010: 181-2). This target was more ambitious than the 140 g CO_2/km target suggested by the Commission. The Council, however, differed on an implementation deadline. Member States without car industries, alongside Sweden and the Commission, agreed to a 2005 deadline, while other car-producing Member States, led by Germany and France, insisted that this would be unrealistic (ENDS Report, 257: 40). An 'uncomfortable compromise' (ENDS Report, 257: 40) was reached by stating that the 2005 deadline could be extended until no later than 2010, if the 120 g CO_2/km targets proved impossible to reach (Environment Council, 1996). The Council called the Commission to begin negotiations without delay. It also stated that if the strategy

proved ineffective, the Commission should examine other measures, including binding legislation (Environment Council, 1996).

While the European Parliament was generally supportive of the Community strategy, it objected to the voluntary approach (ENDS Report, 243: 42-3; Keay-Bright, 2000: 59). The use of voluntary agreements was not enshrined in the EU treaties, and therefore meant the Parliament could be excluded from the policymaking process (Bongaerts, 1999: 102). Therefore, Parliament feared that the use of a voluntary agreement would have serious implications for the democratic legitimacy of the Community strategy (Lenschow and Rottmann, 2005: 9). In March 1997, the Parliament's Environment Committee published a report on the Community strategy. The report was critical of both the targets and the policy instruments recommended by the Commission (European Parliament Committee on the Environment, 1997). The report condemned the lack of transparency in the policy choice stage, and claimed that some stakeholders were not consulted before July 1996. The report called for a mandatory target of 120 g CO_2/km by 2005, falling to 90 g CO_2/km by 2010. These targets, it claimed, could be achieved using existing technologies (see also Bongardt and Kebeck 2006: 10-11). However, ACEA rejected these targets as unfeasible and harmful to the car industry (EED, 27.2.1997). Furthermore, the report stated that the problem of consumer demand for more efficient cars was 'fundamentally one of marketing and not of technology', and that carmakers should promote safety and fuel-efficiency over speed and size.

In response to the demands of Parliament and business groups, the Commission published guidelines on voluntary agreements in November 1996 (CEC, 1996a). These guidelines included the consultation of interested parties, quantified objectives and interim targets, adequate monitoring and independent verification of results, and the provision of information and transparency (Chapter 4). The Commission acknowledged that only non-binding agreements could be signed at the EU-level, as the EU Treaty did not make provision for binding agreements (Article 41). It identified the reductions of car CO_2 emissions as a suitable case for the employment of a voluntary agreement

(Article 44). It was against this background that the Commission conducted its negotiations with carmakers on a voluntary agreement, as discussed below.

The Design of the Voluntary Agreement

Following the publication of the Community strategy, the Commission conducted negotiations with ACEA on a voluntary agreement to reduce CO_2 emissions from new cars between 1996 and 1998. These negotiations did not include any other stakeholders, and lacked transparency. From the outset, therefore, the process of designing the voluntary agreement did not adhere to the EU guidelines on voluntary agreements mentioned above. The process of negotiations and policy design of the voluntary agreement can be divided into two stages. In the first, during 1996 and 1997, carmakers resisted the targets proposed by the Commission, and lobbied against an international climate change agreement. In the second stage, from the agreement on the Kyoto Protocol in December 1997 to the signing of the voluntary agreement in 1998, carmakers adopted a more accommodating approach.

Negotiating the Voluntary Agreement

Negotiations between the Commission and the car industry on a voluntary agreement began in 1996. Two desk officers, one from DG Environment and one from DG Industry, were appointed alongside two Ford engineers representing ACEA. They held monthly meetings throughout 1996 and 1997, which were closed to other policy actors (Keay-Bright 2000: 21; 2001: 6). From the early stages of negotiations, it was clear to all parties that the minimum acceptable reductions target would be 140 g CO_2/km (Keay-Bright, 2001: 7), as already stated in the Community strategy. Yet, negotiations continued for nearly two years, due to ACEA's reluctance to accept the Commission's proposed target.

As mentioned above, the Commission was in a weak bargaining position against carmakers. Due to time and resource constraints, the Commission did not conduct any independent technical studies on the feasibility of CO_2 emissions reductions, and had to

rely on figures presented by the car industry (Keay-Bright, 2001:7). DG Environment believed that it would have been nearly impossible to reconcile differences between the findings of independent and industry studies. Moreover, it was difficult to ensure the independence of such studies, as carmakers possessed all the technical knowledge (Keay-Bright, 2001: 7), thus illustrating an information asymmetry between these policy actors. Furthermore, the Commission was dependent on the cooperation of the car industry in order to ensure the successful implementation of the Community strategy. The Commission and Environment Council had already expressed their enthusiasm for the use of voluntary agreements, and did not have any alternative policy instruments to hand in case negotiations failed. These factors weakened the Commission's negotiating position against ACEA (ibid.).

While the Commission was keen to strike a deal ahead of international climate change talks under the UNFCCC in Kyoto in 1997, some carmakers, including German manufacturers, were reluctant to commit to steep emissions reductions before the outcomes of the Kyoto conference became known (Keay-Bright, 2001: 7). Instead, ACEA asked Ford and Renault to conduct technical studies to estimate feasible CO_2 emissions reductions targets (Keay-Bright, 2001: 7). In June 1997, ACEA offered to reduce its CO_2 emissions by 10% from 1995 levels to 167 g CO_2/km by 2005, (EED, 16.10.1997; 18.11.1997). It said this target was feasible based on existing market conditions (Keay-Bright, 2001: 7). The association did not believe the market would shift towards smaller cars (downsizing), as consumers demanded larger cars, and were reluctant to pay more for fuel-efficient cars (ENDS Report 273: 38). This offer, however, was still far from the Commission's proposal, which ACEA deemed as unrealistic and threatening the competitiveness of the industry (EED, 28.8.1997; 16.10.1997, ENDS Report 273: 38). The offer was rejected by the Commission as insufficient for achieving CO_2 emissions reductions (Keay-Bright, 2001: 8). Negotiations then came to a standstill, and a progress report to the Environment Council due in July 1997 was postponed (EED, 28.8.1997).

ACEA had several reasons to propose relatively un-ambitious emissions reductions targets. The industry was suffering from overcapacity and operated on very

narrow profit margins. It was therefore reluctant to pass on any additional costs to consumers. Conversely, carmakers were protective of their most profitable market segments, which consisted of luxury cars and SUVs. These cars are generally more polluting and would therefore face more challenging emissions reductions cuts. Further, in order to reach internal agreement, ACEA had to incorporate the interests of all its members by establishing the 'lowest common denominator' target for emissions reductions (Keay-Bright, 2001: 7). Indeed, one of the main difficulties in reaching an agreement was the inability of ACEA members to agree on internal burden-sharing (EED, 18.11.1997; Keay-Bright, 2001: 8). German carmakers and Volvo, who manufacture larger, more polluting cars, offered a 25% reduction in CO_2 emissions by 2005, while manufacturers of smaller cars insisted that reductions be measured in absolute terms. French manufacturers offered to reduce their emissions to 150 g CO_2/km by 2005, and Fiat bettered this by agreeing to 140 g CO_2/km (ENDS Report, 273: 38). Internal disagreement and competition issues meant that in an ACEA board meeting in December 1997, consensus was not forthcoming (Keay-Bright, 2001:8).

At the same time, some ACEA members employed more defensive strategies to contest international climate-change governance. Several carmakers and oil companies, including Ford, DaimlerChrysler and GM, BP, Shell and Exxon, were members of the Global Climate Coalition (GCC). The GCC represented the interests of business groups who were major producers or consumers of fossil fuels, and therefore contested climate change mitigation (Levy and Egan, 2003: 815). Ahead of the Kyoto conference, the GCC was involved in heavy lobbying activities to prevent an international climate change agreement (Levy and Egan, 2003: 815; Friends of the Earth, 1997). Thus, ACEA had an interest in postponing the voluntary agreement until the outcomes of the Kyoto conference became known (Keay-Bright, 2001: 7).

By October 1997, the Commission's hopes of securing an agreement with the car industry 'reached a low ebb' (EED, 16.10.1997). Since differences among companies ran 'along national lines', Environment Commissioner Bjerregaard wrote to Environment ministers, and urged them to take the matter up with their domestic carmakers. She emphasised that if progress towards an agreement was not made, the EU

would decide on targets unilaterally (ENDS Report, 273: 38). Bjerregaard warned ACEA that setting mandatory targets 'would not be in their interest' (Haigh, 2003: 14.8-3-4). Negotiations then gained momentum following the signing of the Kyoto Protocol in December 1997, as discussed below.

Agreeing on Targets

In December 1997, under the Kyoto Protocol, the EU committed to an 8% reduction in GHG emissions from 1990 levels between 2008 and 2012. The Commission was then provided with an impetus to finalise an agreement with the car industry (Keay-Bright, 2000: 6). Moreover, the agreement on the Kyoto protocol marked a change in industry's attitude towards climate change from contestation towards acceptance and accommodation (Levy and Egan, 2003: 824). Both carmakers and the Commission were committed to finalising an agreement (Bongardt and Kebeck 2006: 10-11). In December 1997, the Environment Council called the car industry to 'ensure a satisfactory outcome of the negotiations' and asked the Commission to report back in March 1998. It said that if no satisfactory results were obtained by that date, the Commission should propose mandatory legislation (Environment Council, 1997b).

In late 1997, the Commission and ACEA began negotiating at a higher political level. Environment Commissioner, Ritt Bjerregaard and Industry Commissioner, Martin Bangemann, took lead of negotiations for the Commission (Keay-Bright, 2000: 6; Lenschow and Rottmann, 2005: 9). ACEA President and CEO of BMW, Bernd Pischetsrieder, led the negotiations for ACEA, and became a driving force of the negotiations (Keay-Bright, 2001: 10). Yet, by February 1998 it seemed that negotiations were 'well and truly deadlocked' (Coss, 1998). The Commission consequently reinstated the threat of mandatory legislation (EED, 19.2.1998).

The threat of mandatory legislation prompted ACEA to take action. In March 1998, ACEA agreed to a 140 g CO_2/km target by 2008 – three years later than the original 2005 deadline (EED, 11.3.1998; Keay Bright, 2001: 10). ACEA said that by postponing the deadline it was able to ensure the support of its member companies (ENDS Report 278: 41). ACEA further weakened the 120 g CO_2/km target by saying it would review the objective of meeting this target by 2012, in a possible extension of the

voluntary agreement. The 120 g CO_2/km target originally envisioned for 2005 was thus postponed until 2012 at the earliest (ten Brink, 2010: 182-183), as discussed in Chapter 7.

ACEA's offer was strongly influenced by the efforts of ACEA president Bernd Pischetsrieder (Keay-Bright, 2001: 10; Lenschow and Rottmann, 2005: 8-10). As mentioned above, some carmakers, including Volkswagen and Peugeot, were supportive of mandatory legislation, while other carmakers, including BMW and Daimler-Chrysler were opposed to this (Keay-Bright, 2001: 10). A voluntary agreement advantaged manufacturers of larger, more polluting cars, such as BMW, as it allowed for more flexibility in implementation. Manufacturers of smaller, less polluting cars could reach the 140 g CO_2/km target more readily (Lenschow and Rottmann, 2005: 9-10). Pischetsrieder therefore had an interest in protecting the competitiveness of BMW and manufacturers of larger cars, which would face more difficulties in meeting the 140 g CO_2/km target. Moreover, since the German car industry already had experience with a national voluntary agreement, it preferred this policy instrument (Keay-Bright, 2001: 10; Lenschow and Rottmann, 2005: 8-10). The voluntary agreement was also championed by Industry Commissioner, Martin Bangemann, and the UK's Minister of State for the Environment, Michael Meacher, who was keen to reach an agreement under the UK's EU presidency in the first half on 1998 (EED, 1.7.1998; Keay-Bright, 2000: 26).

ACEA's offer received a cautious welcome from the EU institutions. DGs Environment and Industry accepted the offer with some reservations (Keay-Bright, 2000: 26). In March 1998, the Environment Council said that the offer could provide the basis for future agreement, and requested the Commission to report back ahead of its June meeting (Environment Council, 1998a). The Council had several reasons to endorse the voluntary approach. Firstly, Member States were under increasing pressure to act on CO_2 mitigation following the Kyoto agreement. However, differences between Member States meant that consensus on mandatory legislation to reduce car CO_2 was difficult to reach (EED, 19.3.1998). Furthermore, ACEA president, Pischetsrieder, lobbied several car-producing Member States to secure their support for a voluntary

agreement (Lenschow and Rottmann, 2005: 8). The European Parliament showed some signs of support for the voluntary agreement. Parliament indicated that while it 'would maintain its opposition to an agreement in principle [...it] would accept it under certain conditions' (Bongaerts, 1999: 102). In particular, Parliament was opposed to the lack of sanctions should the agreement fail (Haigh, 2003: 14.8-4). This led the Commission to introduce the threat of mandatory legislation in case of non-compliance into the terms of the voluntary agreement (Bongaerts, 1999: 102; CEC, 1998d; ten Brink, 2010: 182). These concerns were shared by environmental NGOs, which were very critical of the proposal. They said the 140 g CO_2/km target was too lenient, and that the conditions ACEA was seeking would make it "meaningless" (EED, 19.3.1998). The EEB, for example, urged the Commission to introduce mandatory legislation, and expressed its dismay with the voluntary approach (Keay-Bright, 2000: 60).

Despite the progress on the voluntary agreement, some points of contestation remained. ACEA made its offer contingent on the availability of low-sulphur fuels from 2005, and on legislators not introducing 'negative' measures on diesel-fuelled cars (ENDS Report 278: 41). The demand for the introduction of low-sulphur fuels was particularly contested. The matter was at the time subject to the Conciliation procedure between the Parliament and the Environment Council under the Auto-Oil I Programme, and was a source of disagreement and rivalry between the car and oil industries (ENDS Report, 278: 41; Wurzel, 2002: 170). The oil industry claimed that improving fuel quality would result in higher CO_2 emissions from refining, while the car industry maintained that low-sulphur fuels were necessary for the introduction of direct injection technologies (Keay-Bright, 2000: 38). Thus, carmakers and oil companies shifted the responsibility for reducing CO_2 from one to the other.

In early June 1998, ACEA submitted a new proposal for a voluntary agreement to the Commission, which addressed some of the points of disagreement, especially with regards to fuel quality (CEC, 1998a). However, the Commission delayed its opinion to the Environment Council, awaiting decision on the fuel quality Directive under the Auto-Oil I programme (CEC, 1998a; EED, 3.6.1998). The Environment Council called the Commission to continue negotiations and resolve outstanding issues

ahead of its September 1998 meeting (Environment Council, 1998b). Agreement on sulphur levels in fuels was reached in June 1998 (European Parliament and Council of the European Union, 1998). Under the Euro 4 standards, low-sulphur fuels with 50 parts per million (ppm) sulphur became mandatory from 2005. It was also expected that some ultra-low sulphur fuels (10ppm) would be available that year, and widely available from 2008. DG Energy accused ACEA of manipulating the outcomes of the Auto-Oil I process, and using the issue of fuel quality as 'a tactic to protect itself from the commitment' (Keay-Bright, 2000: 39). DG Energy also accused DG Environment and DG Industry of being influenced by ACEA, while DGs Environment and Industry accused DG Energy of being heavily influenced by European oil companies (Keay-Bright, 2000: 39). This process exposed rivalry both between the car and oil industries, and within the Commission.

An agreement between the Commission and ACEA was finally reached in July 1998 (CEC, 1998d). The main points of this agreement are summarised in Box 5.1. The agreement was signed between the Commission and ACEA, and therefore did not require the commitment of individual carmakers (ACEA, 1998). Rather, ACEA members supported the agreement and 'agreed to make every endeavour to contribute to the achievement of ACEA's commitments' (CEC, 1998d: 5.2). Carmakers were expected to reduce the average CO_2 emissions of new cars from an average of 186 g CO_2/km in 1995 to 140 g CO_2/km by 2008. An interim target in the range of 165-170 g CO_2/km was set for 2003, and ACEA promised to introduce some car models emitting 120 g CO_2/km or less by 2000 (CEC, 1998d). The ACEA agreement was expected to contribute 70% of the EU's emissions reductions efforts to meet the 120 g CO_2/km by 2010 at latest. The parties expected that these targets would be achieved mainly through technical measures, and related market changes (CEC, 1998d Article 2.1). A progress review was set for 2003, and ACEA was expected to then introduce a proposal on CO_2 emissions reduction targets for 2012. The Commission said it would consider extending the voluntary agreement if carmakers were willing to move towards the 120 g CO_2/km by 2012 (CEC, 1998d: Article 5.3), but would not hesitate to introduce mandatory legislation if it transpired that the car industry was not honouring its commitment.

The agreement was based on several assumptions, including: the wide availability of low sulphur fuels (30ppm) by 2000, and their full availability by 2005; ensuring a level playing field to promote the competitiveness of EU carmakers; the 'unhampered diffusion of fuel-efficient technologies into the market', which meant that no negative fiscal measures should be applied against diesel-fuelled cars (Keay-Bright, 2000: 42); and the consideration of any adverse economic impacts of the agreement on the competitiveness of ACEA members. ACEA also assumed that 'in line with the Kyoto Protocol spirit' the Commission would pursue agreement with non-EU carmakers (ACEA, 1998). These "assumptions" were more flexible than the conditions ACEA presented in previous drafts of the agreement (Keay-Bright, 2001: 16). However, they allowed for some leeway in compliance if these assumptions were not met. Thus, 'concessions were clearly awarded to industry through the drafting of the terms of the agreement' (Keay-Bright, 2001: 10).

Terms of the ACEA Agreement

- 140 g CO_2/km as average for new cars sold in the EU by 2008 through technological improvements and related market changes.
- Car models emitting 120 g CO_2/km or less to be introduced into the EU market by 2000.
- Interim target of 165-170 g CO_2/km by 2003.
- Review in 2003 of potential measures to achieve a 120 g CO_2/km target by 2012.

Assumptions

- The availability of 'enabling fuels' for the application of technological measures to reduce car CO_2 emissions. ACEA expected fuel quality standards to exceed mandatory standards.
- Conclusion of voluntary agreements with non-EU carmakers in order to ensure unhampered competition.
- Unhampered diffusion of fuel-efficient technologies. This would not restrict fiscal and regulatory subsidiarity, although such measures would be considered in the monitoring of the agreement.
- Account will be taken of the impact of the strategy on the European economy in general and the car industry in particular.

Monitoring

- An independent monitoring system should be established by Member States. Until this is achieved, the car industry will provide necessary monitoring data.
- A 'holistic' monitoring system will be administered by the Commission and ACEA. This system will scrutinise the assumptions underlying the agreement. This system will identify circumstance which might facilitate or hinder progress.
- Commission will publish annual implementation reports to the Council of Ministers and the Parliament. These reports will 'satisfy the criterion of public information and transparency'.

Box 5.1: Summary of the ACEA agreement

Source: CEC (1998d)

Initial Responses to the Voluntary Agreement

The ACEA agreement was received with mixed responses from various policy actors. While the Commission welcomed the agreement, the Environment Council was divided in its response, and the European Parliament objected to a voluntary agreement. Environmental NGOs were also highly critical of the agreement, as discussed below.

EU Institutions and Member States

The reactions to the ACEA agreement varied among and within the EU institutions. Unsurprisingly, the Commission seemed enthusiastic about the agreement. Environment Commissioner Ritt Bjerregaard said:

> I am very pleased with this agreement which will contribute significantly to the EU's overall climate change objectives. It shows that one of the key sectors of the European industry is willing to contribute actively to our efforts to reduce CO_2-emissions [...] In many ways, this is a test case for the wider use of environmental agreements as an instrument (CEC, 1998e).

Equally, Industry Commissioner Martin Bangemann said the agreement represented a "landmark achievement", as it granted carmakers flexibility and cost effectiveness in implementation, while promoting a more ambitious commitment (CEC, 1998e). Previous disputes between DG Environment and DG Industry were thus reconciled through the adoption of a voluntary agreement (Keay-Bright, 2000: 26). The Commission said it would not publish a Recommendation on the agreement until October 1998, awaiting the approval of the Environment Council and Parliament.

In October 1998, the Environment Council endorsed the ACEA agreement. The Council welcomed the 140 g CO_2/km by 2008 target, and called on the Commission to review the agreement in 2003, with a view of moving towards a 120 g CO_2/km target by 2012 (Environment Council, 1998c). Despite the general support for the voluntary agreement, some objections were noted. In particular, Denmark called on the Commission to prepare legislative measures in case carmakers failed to fulfil their commitments (Haigh, 2003: 14.8-4). Other Member States were opposed to this measure, and considered the threat of mandatory legislation to undermine the 'good faith' of the agreement. A compromise was reached when Ministers agreed to immediately introduce legislation if it became clear that ACEA was not on track to meeting its commitments (EED, 6.10.1998). The Environment Council expected the ACEA agreement to contribute an ambitious 15% to the EU's CO_2 emissions reductions efforts under the Kyoto Protocol (Environment Council, 1998c). The ACEA agreement was therefore considered by some Environment Ministers, including the Austrian Environment Minister Martin Bartenstein, to be the "most wide-ranging and most important" voluntary agreement concluded between the EU and industry (EED,

6.10.1998). The enthusiasm of the Commission was therefore largely shared by the Environment Council, with some reservations from 'greener' Member States, such as Denmark.

The European Parliament, on the other hand, was more critical of the ACEA agreement. As mentioned earlier in this chapter, Parliament was sceptical to the use of voluntary agreements, as these were not enshrined in the EU Treaties, and did not ensure the participation of Parliament. Hence, the democratic legitimacy of these agreements was questionable (Volpi and Singer, 2002: 150). The Parliament noted that the ACEA agreement did not dispel its 'doubts as to the effectiveness of voluntary commitments' (European Parliament, 1998; Article 11b). Parliament noted several problems with the ACEA agreement that could impede its implementation. These included the lack of sanctions and alternative arrangements in case of non-compliance; the weakness of the interim targets; the need for better monitoring arrangements; and the need for signing similar agreements with non-ACEA carmakers (European Parliament, 1998). The Parliament said that it would only accept the agreement if these issues were resolved in negotiations with carmakers. It called on the Commission to put forward a legal framework for the ACEA agreement. These calls were rejected by the Commission and Environment Council, as they were seen as demonstrating a lack of confidence and trust in carmakers (Haigh, 2003: 14.8-6).

Despites Parliament's objections, the Commission published a Recommendation on the ACEA agreement in February 1999 (CEC, 1999a). The Commission said it would introduce a legislative proposal should it become clear that ACEA was not on track to meeting the interim targets for 2003, or the 140 g CO_2/km objective for 2008. However, considering that agreement on voluntary targets was reached after nearly 8 years of negotiations, the threat of mandatory legislation remained a weak possibility. Furthermore, the Commission did not address Parliament's concerns regarding the weakness of the interim targets and monitoring arrangements. Thus, the ACEA agreement 'fell into the "grey zone" of EU law' (Keay-Bright, 2000: 56). In practice, 'the Commission bypassed the authority of both the Council and Parliament in order to

ensure an agreement with carmakers. The legitimacy of the agreement was therefore questioned' (Keay-Bright, 2000: 59).

The Commission then pursued similar agreements with Japanese and Korean carmakers. As mentioned above, the completion of these agreements was one of the assumptions made under the ACEA agreement, in order to protect the competitiveness of EU carmakers (CEC, 1998d, Article 3). Negotiations with the Japanese Association of Automobile Manufacturers (JAMA) and Korean Association of Automobile Manufacturers (KAMA), the main non-EU producers in the European market, began following the signing of the ACEA agreement in 1998. While JAMA and KAMA, who had higher average CO_2 emissions than ACEA, thought that reducing their average fleet emissions by 25% would constitute an 'equivalent effort' to the ACEA agreement, the Commission insisted that they meet the 140 g CO_2/km target (Keay-Bright, 2000: 45). A compromise was reached when both associations agreed to reduce their emissions to 140 g CO_2/km by 2009, a year later than ACEA. The interim targets were also relaxed for both associations (Haigh, 2003:14.8-4-.5). JAMA promised to introduce some car models emitting 120 g CO_2/km or less by 2000, while KAMA committed to do so as soon as possible (ten Brink, 2010: 182-3). These commitments required significant efforts in particular from KAMA, whose car fleet had higher average CO_2 emissions, and lacked the technological know-how (Kågeson, 2000: 12). Nonetheless, the Commission claimed that these agreements constituted equivalent efforts to those made by ACEA (CEC, 1999b: Article 2.2). The Environment Council approved the agreements and called on the Commission to report annually on all three agreements (Environment Council, 1999). The JAMA and KAMA agreements were published as Commission Recommendations in 2000 (CEC, 2000b, CEC, 2000a).

Criticism of Environmental Groups to the Agreement

Environmental NGOs were highly critical of the ACEA agreement on several grounds. Firstly, they questioned the legitimacy and transparency of the agreement. Environmental groups claimed that under the provisions made in Directive 91/441/EEC (Council of the European Union, 1991), the Commission was expected to introduce legally-binding measures to reduce CO_2 emissions from cars (Keay-Bright, 2000: 7).

Similarly to Parliament, environmental NGOs raised concerns about the lack of a legal framework for voluntary agreements at the EU-level. They claimed this strategy 'effectively limited the involvement of the Council and Parliament' in the negotiations of the agreement (Keay-Bright, 2000: 7), while environmental NGOs were only consulted once in the process (Volpi and Singer, 2002: 150). The ACEA agreement and its underlying assumptions therefore posed a 'direct threat to democracy' (Keay-Bright, 2000: 60).

Moreover, environmental NGOs claimed that the ACEA agreement was environmentally ineffective (Volpi and Singer, 2002: 149). Environmental groups were sceptical of the Commission's estimates that the voluntary agreement would contribute 15% of the EU's CO_2 emissions reductions under the Kyoto Protocol (Kågeson, 2000: 12). A study by the Dutch Government (quoted in Volpi and Singer, 2002: 150) stated that the ACEA agreement would have a similar emissions-reduction effect on Dutch CO_2 emissions as raising tyre pressure in cars. Other projections suggested that the agreement would result in the stabilisation of CO_2 emissions from passenger cars at 20-30 percent above 1990 level by 2012 (Keay-Bright, 2000: 6-7). The projected increase in car CO_2 emissions was at least partially the result of the rebound effect, whereby lower fuel costs stimulated an increase in car use. This adverse impact, environmental NGOs said, could be addressed by raising fuel taxes (Kågeson, 2000: 33). A measure that proved difficult to implement, as discussed in Chapter 6.

Further, the 140 g CO_2/km target was considered by environmental NGOs to be 'technically outdated' (Volpi and Singer, 2002: 149). Several studies conducted in the 1990s indicated that the fuel efficiency of cars could be dramatically improved using both incremental and new technologies, as discussed in Chapter 6 (see Keay-Bright, 2000: 27 for a review of these studies). Moreover, the objectives of the ACEA agreement did not support a shift towards low-carbon technologies (Keay-Bright, 2000: 7; Volpi and Singer, 2002: 150). Rather, ACEA said that it would achieve reductions through the uptake of direct injection petrol and diesel technologies (Kågeson, 2000: 16). Further, the lack of long-term targets meant that carmakers had no incentive for technological innovations (Keay-Bright, 2000: 7). Thus, environmental NGOs claimed

that 'the danger of regulatory capture materialised and led to the agreement on very weak targets' (Volpi and Singer, 2002: 150).

Environmental NGOs argued that it was unlikely that the car industry would meet the voluntary commitment. Kågeson (2000: 34) observed that

> From a technological point of view the manufacturing industry should have no insurmountable difficulties producing cars which on average emit less than 140 g CO_2 per km [...] instead the real challenge lies in marketing. Manufacturers have successfully linked comfort and power. For a given model, the more comfort the buyer wants, the more power he/she is obliged to buy (Kågeson, 2000: 34).

In other words, 'technical feasibility is not the same as economic feasibility' (Keay-Bright, 2000: 28). While CO_2 emissions reductions in the magnitude of 40% were achievable (CEC, 1995 Annex I, p. 18), consumer demand for larger cars (upsizing) was considered to be a major obstacle to the successful implementation of the agreement (Keay-Bright, 2000: 29). This demand was fuelled by carmakers, which enjoyed higher profit margins from the sales of more carbon-intensive cars. Therefore, carmakers were 'expected to continue to encourage the trend towards larger vehicles' (Kågeson, 2000: 34), as discussed in Chapter 6. Environmental groups therefore advocated widening the policy instrument mix to include fiscal and regulatory measures as well as a system of tradable permits among carmakers (Keay-Bright, 2000; Kågeson, 2000; 2005; Volpi and Singer, 2002).

Another criticism that was voiced by environmental NGOs concerned the lack of sanctions in case of non-compliance with the agreement (Keay-Bright, 2000: 7). Moreover, since EU competition law prevented an agreement on internal burden-sharing among carmakers, there were no measures in place to deter free-riding by individual carmakers (Volpi and Singer, 2002: 151). The lack of an internal burden-sharing arrangement meant that it was unclear whether carmakers were committed to an absolute or a percentage reduction in CO_2 emissions. ACEA therefore had no effective way of dealing with free-riders (Kågeson, 2000: 13). Furthermore, the lack of information on the progress of individual carmakers, as agreed under the Monitoring Decision (discussed in Chapter 6), exacerbated the likelihood of free riding. The car industry was therefore effectively its own watchdog, making it even more likely that the

commitments would not be met (Volpi and Singer, 2002: 151). The above-mentioned criticisms raised by environmental NGOs are summarised in Table 5.1.

Criterion for success of voluntary agreements	Evaluation: ENGOs	Comments
Legitimacy	X	Voluntary agreements not enshrined in EU treaties, Parliament objected to agreement.
Participation	X	Stakeholders were not consulted during the policy choice and design stages.
Transparency	X	Negotiations were closed to most policy actors, progress of individual carmakers not revealed.
Environmental effectiveness	X	Agreement will not result in reduction of CO_2 emissions from passenger cars
Dynamic efficiency	X	140 g CO_2/km targets did little promote technological innovation
Sanctions	X	Not in place, regulatory threat unlikely
Free-riding	X	No measures in place to deter free riding

Table 5.1: Environmental NGOs' criticisms of the design of the ACEA agreement

Source: synthesised from Keay-Bright, 2000; 2001; Kågeson, 2000; 2005; Volpi and Singer, 2002)

Conclusions

This chapter illustrated the complexities inherent in agreeing on EU-wide instruments to reduce CO_2 emissions from cars. From the early 1990s, when the problem of car CO_2 emissions came onto the EU policy agenda, to the publication of the ACEA agreement in 1998, public and private policy actors were engaged in contestations and compromises which shaped the choice and design of the ACEA agreement. In particular, contradictions were noted between the need for environmental protection and the promotion of economic growth and competitiveness.

Differences among Member States regarding the best policy instruments to reduce car CO_2 emissions prolonged the policy choice stage of the ACEA agreement. Each car-producing Member State favoured policy instruments that enhanced the

competitiveness of its domestic car industry. Member States could therefore not agree on their preferred policy instruments. Agreement among Member States on fiscal measures was also not forthcoming. The inability of Member States to agree on policy instruments in general and fiscal measures in particular, pointed towards Member States' interests of protecting national economic competitiveness.

Within the Commission, there was also disagreement regarding the choice of policy instruments. DG Environment advocated the use of fiscal measures, while DG Industry was supportive of a voluntary agreement. The Community Strategy, published in December 1995, reconciled these inter-Commission differences. It prescribed both a voluntary agreement and fiscal measures, alongside a labelling scheme. At the design stage of the ACEA agreement, conflicts arose between DG Energy and DGs Industry and Environment. The former blamed the latter for promoting the interests of the car industry, while the latter accused the former of promoting the interests of the oil industry. Thus, the different DGs can be associated with the different interest groups they represent.

The Environment Council was also largely supportive of the voluntary agreement. The advocacy of voluntary agreements, as envisioned under the 5th environmental action programme, was said to promote dialogue with industry. However, while both the Commission and the Environment Council endorsed the voluntary approach, the European Parliament was sceptical of the use of EU-wide voluntary agreements. In particular, Parliament raised concerns about the legitimacy of these approaches. These concerns were justified, as Parliament was largely excluded from the policy choice and design stages of the ACEA agreement.

Carmakers changed their view on a voluntary approach at regular intervals. They first suggested to voluntarily reduce car CO_2 emissions in 1991. Several carmakers subsequently signed national voluntary agreements, and lobbied through the UNICE to promote these at the EU-level. This support for voluntary action was emblematic of the growing popularity for voluntary environmental agreements among business groups. However, carmakers were apprehensive of the voluntary approach suggested under the Community strategy in 1995. They resisted the 140 g CO_2/km

target proposed by the Commission and only agreed to voluntarily reduce their emissions following the agreement on the Kyoto Protocol in 1997. Growing environmental concerns therefore prompted carmakers to adopt a more accommodating approach to reducing their CO_2 emissions.

Perhaps needless to say, environmental considerations shaped the choice and design of the ACEA agreement. Concerns with the impacts of climate change gained importance from the early 1990s, when these became increasingly prominent on the EU agenda. International climate change politics spurred EU action on reducing car CO_2 emissions. However, the impact of environmental groups at the choice and design stages of the ACEA agreement was negligible. Environmental groups were excluded from these processes, and remained critical of the use of voluntary agreements in general, and the ACEA agreement in particular. Environmental NGOs claimed that the choice and design of the voluntary agreement meant that carmakers were not obliged to take action to reduce their CO_2 emissions. They argued that non-compliance, free-riding and the ineffectiveness of the agreement were more than likely. Thus, in the accommodation of economic versus environmental interests, it seemed that the former were more influential in shaping the choice and design of the voluntary agreement.

Crucially, a common concern of both political society and the car industry was ensuring continued personal freedom of movement and consumer demand for car use. The solutions to the problem of rising car CO_2 emissions were from the outset framed in terms of technological developments, rather than curbing demand for personal mobility. The link between consumer demand and the economic viability of the car industry was a recurring theme throughout these policymaking stages. It was agreed by all parties that it was technically possible to achieve reductions in CO_2 emissions beyond the 140 g CO_2/km target. However, the costs of meeting more ambitious targets and their effect on consumer demand and the competitiveness of the car industry were used as arguments not to pursue more ambitious CO_2 emissions reductions goals. Thus, the choice and design of the ACEA agreement accommodated conflicting economic, environmental, social and political interests. These themes are developed in Chapter 8. The following chapter turns to examine the implementation of the ACEA agreement.

Chapter 6
Driving towards Implementation of the Voluntary Agreement

Introduction

The ACEA agreement was the EU's main policy instrument to reduce CO_2 emissions from new cars between 1998 and 2008. During this decade, economic, environmental, social and political factors all shaped the implementation of the agreement. Up until 2003, it seemed that carmakers were on track to meeting the voluntary commitment. ACEA exceeded the interim target range set for that year, and the Commission was satisfied with carmakers' progress. However, ACEA's reduction efforts subsequently dwindled, and progress on the implementation of the agreement slowed down considerably between 2004 and 2006. Despite the renewed momentum on reducing CO_2 emissions between 2007 and 2008, ACEA did not meet the 140 g CO_2/km target set for 2008, and the voluntary approach was replaced with mandatory legislation in 2009 (as discussed in Chapter 7).

This chapter provides a critical account of the implementation of the ACEA agreement. It departs from the chronological timeline otherwise largely followed in Chapters 5 and 7. Instead, it examines the efforts of policymakers, carmakers, environmental NGOs and the impact of consumer demand on the implementation of the voluntary agreement. There is therefore a chronological overlap between this chapter and Chapter 7, which discusses the reformulation of the voluntary agreement, and to a lesser extent with Chapter 5, which discussed the choice and design of the agreement. The decision to review the entire implementation process of the ACEA agreement in this chapter, rather than following a strictly chronological timeline, allowed for a better overview and analysis of the complex political, economic, social and environmental factors that influenced the implementation of the agreement. It also allowed for a more focussed examination of the reformulation of the voluntary agreement in Chapter 7.

The chapter continues by examining the efforts of policymakers to implement the Community strategy to reduce CO_2 emissions from cars in general, and to ensure the monitoring of the voluntary agreement more specifically. It observes that the EU's

objective of reducing car CO_2 emissions relied on carmakers' efforts, especially since the remaining pillars of the Community strategy, the labelling scheme and fiscal measures, proved difficult to implement. The chapter then outlines some of the economic strategies adopted by carmakers to reduce their CO_2 emissions. These included the creation of strategic partnerships, investment in low carbon technologies, and most prominently the uptake of incremental technological innovations, including the wide uptake of diesel-fuelled cars. Some conflicting trends in consumer demand are then noted. While the market share of smaller, less polluting cars increased over the implementation period of the ACEA agreement, so did the market share of larger, more polluting cars. The effects of supply and demand-side factors on these trends are discussed. The chapter then examines how these factors shaped the implementation of the ACEA agreement. It inspects the progress of ACEA and individual carmakers, the input of environmental NGOs, and the overall outcomes of the implementation of the ACEA agreement. The chapter concludes with the observation that conflicting economic, social, political and environmental interests shaped the implementation of the ACEA agreement, and resulted in its eventual failure.

Implementing the Community Strategy: Policymakers' Efforts

To recall, the Community strategy to reduce CO_2 emissions from new cars (CEC, 1995) comprised three pillars. The voluntary agreement was the main pillar of the strategy. It was supported by a labelling scheme and fiscal measures to influence consumer demand for more fuel-efficient cars. The voluntary agreement was expected to result in the reduction of average new car CO_2 emissions to 140 g CO_2/km by 2008. The remaining pillars were expected to bring emissions down by a further 20 g CO_2/km, in order to meet the EU's objective of 120 g CO_2/km by 2005, or 2010 at latest. This section examines the efforts of the EU institutions to implement the labelling scheme, fiscal measures and the monitoring of the ACEA agreement. In so doing, it provides an overview of the EU's implementation of the entire Community strategy. The section concludes that the EU's progress on implementing the two supporting pillars of the

Community strategy (that is fiscal measures and the labelling scheme) was limited. Therefore, the voluntary agreement remained the EU's predominant instrument to reduce car CO_2 emissions.

The Labelling Directive

The Commission initially proposed a Directive on labelling in September 1998 (CEC, 1998c). The Commission hoped that the labelling Directive would play a

> [K]ey role in the operation of market forces and that the provision of accurate, relevant and comparable information on the specific fuel consumption of passenger cars may influence consumer choice in favour of those cars which use less fuel and thereby emit less CO_2, thus prompting manufacturers to take steps to reduce the fuel consumption of the cars that they manufacture (CEC, 1998c: Point 6).

Thus, labelling schemes were seen as a measure to influence both supply and demand for more fuel-efficient cars.

The Environment Council endorsed the Commission's proposal in December 1998 (Environment Council 1998d), and called for minimum labelling requirements, which Member States could exceed. The Parliament and Environment Council agreed on the labelling Directive in June 1999 (Haigh, 2003: 14.8-5), and the Directive was published in December that year (European Parliament and Council of the European Union, 1999). The requirements of the Directive included a label to be displayed on new cars at point of sale, informing of fuel consumption in l/100km, and the official specific CO_2 emissions in grams per kilometre; a fuel economy guide; promotional information posters; and the inclusions of emissions and fuel consumption data in promotional literature (Haigh, 2003: 14.8-1-2).

The Directive was met with scepticism from carmakers and environmental groups alike. Carmakers gave the Directive a 'lukewarm response', and claimed that the labelling scheme could be achieved through voluntary measures (EED, 4.9.1998). Environmental NGOs doubted the effectiveness of the labelling scheme, claiming it would have little effect on consumer demand, especially where not used in combination with fiscal incentives (Keay-Bright, 2000: 61; Kågeson, 2005: 26). Member States' responses to the labelling scheme also varied. The Directive came into force in January 2001. Member States were due to report back to the Commission on its effectiveness by

the end of 2003 (Haigh, 2003: 14.8-2). However, by January 2001 several Member States, including France, Germany, Italy, Spain and the UK, failed to transpose the Directive (EED, 15.11.2001). The UK government adopted the Directive in November 2001, after receiving a second warning letter from the Commission (ENDS Report 322: 36). Italy and France were condemned by the ECJ in 2003 for failing to transpose the Directive, while the Commission threatened several other countries with legal action on this matter (EED, 12.9.2003).

The effectiveness of the labelling Directive was questionable, and varied among Member States (Grünig et al., 2010). Some labelling schemes were more successful than others (ten Brink, 2010: 184-185). A study conducted for the European Parliament in 2010 (Grünig et al., 2010) showed that the implementation of the Directive remained patchy (p. 22). The influence of labelling schemes, and environmental considerations more broadly, on consumer demand was marginal. Other factors such as brand and product differentiation and wider socio-economic factors were more likely to shape consumer choice (pp. 29-30). The study concluded that 'the decision to purchase a car is a complex, some say highly irrational decision influenced by a wide range of factors' (Grünig et al., 2010: 39). Although consumers were aware of environmental matters and fuel economy, other factors such as reliability, safety, comfort and price were more important in shaping consumer preferences. Furthermore, environmental NGOs criticised carmakers for failing to include data on CO_2 emissions in promotional literature, and misleading consumers in the provision of data on car CO_2 emissions (McLean et al. 2009: 3). The effectiveness of the labelling Directive was therefore limited not only due to Member States' implementation, but also because of broader societal aspects, and carmakers' advertising tactics, as discussed later in this chapter.

Fiscal Measures

Agreement on fiscal measures proved even more difficult to reach. In 2000, the Commission set up a joint expert group to examine the use of fiscal measures to reduce CO_2 emissions from transport (Haigh, 2003: 14.8-6). In 2002, the Commission published a Communication on the matter (CEC, 2002b). The Communication noted the budgetary dependence of Member States on car-related taxes (Article 2.1). The

Commission identified three main forms of car-related taxation, including registration taxes, annual circulation taxes and fuel taxes. The Commission recommended the introduction of a harmonised, CO_2-based annual circulation tax, similar to the MVEG's proposal from early 1990s (as discussed in Chapter 5). The Commission also called for scrapping car registration taxes, in order to promote the competitiveness of the European car industry, create a level playing field, and encourage the renewal of the European car fleet (Haigh 2003: 14.8-8). With regards to fuel taxes, the Commission noted that these were seen as 'an effective fiscal instrument to collect revenue, to influence the level of car use, or for internalising environmental and social costs linked to the use of passenger cars', and CO_2 emissions in particular (Article 2.5). The Commission noted that most Member States, with the exception of the UK, applied lower taxes on diesel than on petrol. The Commission called for the abolition of these differences, in light of the growing market share of diesel-fuelled cars, and the related environmental and health problems caused by diesel emissions (ibid.). While the Parliament welcomed the proposal, the Environment Council could not reach agreement on the matter (CEC, 2004b: Article 6.1). In 2005, the Commission published a legislative proposal on car taxation (CEC, 2005d). However, the introduction of fiscal measures remained highly unlikely due to the need for unanimous agreement in the Council of Ministers (Kågeson, 2005: 28), as discussed in Chapter 5.

Member States were initially slow to adopt CO_2-based fiscal measures. By 2002, only the UK and the Netherlands adopted such measures (CEC, 2002b: 18). However, by 2008, 14 Member States, including France, Spain, Ireland, Denmark and Portugal had adopted CO_2-based taxes on passenger cars (ACEA, 2008b). Conversely, between 1999 and 2010, fuel taxes in the EU-15 decreased by nearly 10% (T&E, 2011b: 20). One explanation for this trend was the fact that diesel taxes remained lower, while the market share of diesel cars increased throughout this period. T&E called for raising the minimum fuel taxes (ibid., p. 22). However, this was a contested matter, as illustrated later in this chapter.

Moreover, there are still some perverse subsidies promoting the purchase of larger, more polluting cars. For example, Hey (2010: 222) noted that 62% of all cars sold in

Germany in 2007 received tax relief as company cars. Since these benefits are related to expenditure, and since the cost of luxury cars is higher than that of other market segments, 'company buyers will likely opt for heavier and more fuel-consuming models than a private person' (ibid.). A range of fiscal measures which influenced private demand for car use can therefore be discerned. These measures often contradicted the objective of reducing car CO_2 emissions.

ACEA's attitude towards fiscal measures varied over time. In 1998, following the signing of the voluntary agreement, ACEA president Bernd Pischetsrieder expressed his concern that fiscal measures would change the market structure and adversely affect the competitiveness of the car industry, and employment in the sector (CEC, 2002a: Footnote 32). He said that these measures were unnecessary in light of the ambitious emissions reductions targets that ACEA agreed to. ACEA was particularly concerned that fiscal harmonisation would 'jeopardise product diversity' and 'damage financial performance' by 'driving larger more powerful cars out of the market' (CEC, 2002a: Table 4). However, ten years later, in 2008 ACEA welcomed the trend towards Member States' adoption of CO_2-based car taxation, but expressed concerns regarding the lack of fiscal harmonisation. ACEA Secretary General, Ivan Hodac said that only a harmonised tax scheme would remove the distorting effects on the internal market, and 'give the necessary clear market signal which will be decisive in achieving the desired cuts in CO2 emissions' (ACEA, 2008b). Thus, the adoption of fiscal measures on car CO_2 emissions remained a contested matter.

From the above, it can be seen that the impacts of the labelling Directive and fiscal measures on reducing car CO_2 emissions were at best difficult to demonstrate, and at worst negligible (CEC, 2007g: Article 2.2.2-2.2.3). The following sub-section turns to examine policymakers' efforts to ensure the implementation of the remaining pillar of the Community Strategy, that is, the voluntary agreement, through the establishment of a monitoring mechanism.

Monitoring the Voluntary Agreement

The Decision on monitoring the voluntary agreement was published in 2000 (European Parliament and Council of the European Union, 2000). Although the agreement on a

monitoring scheme was 'probably the least contentious' strand of the Community strategy to reduce CO_2 emissions from cars (Haigh, 2003: 14.8-5), it still raised inter-institutional conflicts. The Commission proposed a monitoring scheme in 1998 (CEC, 1998b). However, agreement was only reached in 2000, following a Conciliation procedure between the Environment Council and Parliament. One of the main points of contestation was Parliament's demand for a stronger legal framework for voluntary agreements (European Parliament, 1999: 5d). These demands were backed by the Environment Council, but could not be applied retrospectively to the ACEA agreement (Keay-Bright, 2000: 49).

The monitoring Decision required Member States to collect data on newly registered cars, and pass this information to the Commission, which would then report to the Council of Ministers and Parliament annually (Keay-Bright, 2000: 48). While data was initially provided by carmakers, from 2003, data collected by Member States was used for monitoring the voluntary agreement (Haigh, 2003: 14.8- 2-3). Data collected included specific CO_2 emissions, fuel type, manufacturer, number of cars registered, car mass and power, and engine capacity (ten Brink, 2010: 184). However, the Decision did not include data on car footprint (length x width), despite the relevance of this to fuel economy in terms of, for example, aerodynamics (as discussed in Chapter 7). This matter was subject to industry lobbying, as it revealed sensitive information about car shape and size (Keay-Bright, 2000: 49). Environmental NGOs also voiced concerns that even though monitoring arrangements were in place, there would be scope for statistical discrepancies between data collected by ACEA and data collected by Member States (Keay-Bright, 2000: 8).

Moreover, while manufacturer-specific data were collected, they were not disclosed in the annual progress reports. Withholding information on the progress of individual carmakers was considered to be a 'necessary compromise' to protect carmakers' competitiveness, and reach agreement about a reporting mechanism (ten Brink, 2010: 184). However, the lack of information on the progress of individual carmakers did not allow for public scrutiny, and did not provide carmakers with incentives to improve their environmental reputation (ibid.), and promote proactive environmental strategies

(Keay-Bright, 2000: 49). However, EU law[6] allowed for public access to this information. This right was eventually used by environmental NGOs and investors in order to increase pressure on carmakers (as discussed later in this chapter).

The Commission and ACEA were also committed to presenting joint annual progress reports on the implementation of the agreement (ten Brink, 2010: 184). These reports aimed to assess whether the 'assumptions' made in the agreement, regarding the availability of clean fuels, economic factors, and other variables discussed in Chapter 5, affected the implementation of the agreement. The reports for the interim and final target years (2003 and 2008) were also set to indicate whether emissions reductions were the result of technical measures introduced by carmakers, or non-technical measures under the two remaining pillars of the Community strategy (European Parliament and Council of the European Union, 2000, Article 10). Therefore, these reports required consensus to be reached between the Commission and carmakers, and fostered dialogue between them (Keay-Bright, 2000: 49-50).

In summary, this section discussed the efforts of policymakers at both the EU and Member-State levels to ensure the implementation of the Community strategy to reduce car CO_2 emissions in general, and the ACEA agreement in particular. It touched on some of the complexities and contradictions of implementing demand-side measures to reduce car CO_2 emissions. Due to the difficulties of operating the labelling Directive and agreeing on fiscal measures, the majority of CO_2 emissions reductions were expected to result from carmakers' implementation efforts, as discussed in some detail below.

[6]Article 255 of the treaty establishing the European Community, implemented through Regulation 1049/2001 grants right of access to the documents of the Council, Commission and the European Parliament to EU citizens and to any natural or legal person residing or having its registered office in the EU (ten-Brink, 2010: 185)

Implementing the Voluntary Agreement: Carmakers' Efforts

ACEA perceived the implementation of the voluntary agreement as 'very ambitious in light of present and future technologies' (CEC, 1998d, Annex Article 3, p. 13). Nonetheless, it hoped the commitment would lead to a 'mutual satisfactory environmental agreement' (CEC, 1998d, p. 11). Despite disagreement among carmakers as to what constituted 'equivalent efforts' for reducing car CO_2 emissions (Keay-Bright, 2000: 44), some trends can be discerned in their response to the challenge of reducing the CO_2 emissions of new cars. These included building strategic alliances and partnerships to promote low-carbon innovations, investment in low carbon technologies, and incremental technological developments, as discussed below.

Partnerships and Alliance-Building

A trend towards mergers and acquisitions in the car industry was noted prior to the implementation of the ACEA agreement (as discussed in Chapter 2), and continued throughout the implementation of the agreement. For example, Daimler-Benz and Chrysler merged in 1998 (Wells, 2010: 17), and Renault acquired a substantial minority share in Nissan in 1999 (Mikler, 2009: 19), further augmenting the transnational, oligopolistic nature of the industry. Oil companies also underwent a series of mergers in the late 1990s and early 2000s, creating a 'global oligopoly' led by a few 'megamajor' oil companies, including BP, Shell, Exxon-Mobil and Chevron-Texaco (Levy and Kolk, 2002: 284-285).

Car and oil companies formed a series of strategic alliances to develop low carbon technologies. Already in 1997, Daimler-Benz and Ford launched DBB, a £600 million joint-venture with Ballard Power Systems to develop hydrogen fuel-cell cars (Levy and Egan, 2003: 821). This alliance was later widened to include Shell and Renault-Nissan (Nieuwenhuis and Wells, 2003: 86). In parallel, Toyota and GM launched a competing fuel-cell programme (Levy and Egan, 2003: 821; Nieuwenhuis and Wells, 2003: 86). Other partnerships included collaborations between BP and Ford (EED, 29.8.2000), PSA Peugeot Citroën and electricity firm EDF (EED, 3.5.2002), and Volkswagen and Shell (EED, 5.11.2003). Some of these partnerships are summarised in Table 6.1, according to their technological innovation strategy (diesel, hybrid, or fuel

cell). Carmakers also collaborate on research and development (R&D) of new technologies under the European Council for Automotive Research and Development (EUCAR). EUCAR represented the EU's 14 major car manufacturers. It fostered strategic cooperation on R&D between carmakers, in order to 'achieve technologies for the optimisation of the motor vehicle of the future' (EUCAR, 2012).

Technology	**Lead technology developer**	**Partner carmakers**
Diesel	PSA (Peugeot Citroën)	Ford
	Renault	Nissan
	Toyota	BMW
Hybrid	Toyota	Nissan
Fuel Cell	Toyota	GM
	Ballard	Daimler-Chrysler/ Ford

Table 6.1: Innovative partnerships in the car industry

Source: Austin et al. (2003: 23)

Several trends can be observed from these alliances. Firstly, the predisposition towards industry consolidation and strategic alliance-building can be seen as 'defensive economic strategies' which strengthened the 'bargaining position of key firms, provided opportunities for economies of scale, and reduced the burden of risky investments in low emissions technologies' (Levy and Egan, 2003: 817). Secondly, the partnerships between car and oil companies indicated that these industries overcame some of the rivalries that were evident during the negotiations of the voluntary agreement (as discussed in Chapter 5) (Levy and Egan, 2003: 820-821).

However, some points of contestation remained between the two industries regarding sulphur levels in fuels (ENDS Report, 297: 52-53). These disputes were settled when the Environment Council and Parliament agreed in 2001 to phase-in sulphur-free fuels between 2005 and 2009 (CEC, 2001d). Both industries sought to maintain their economic power in light of the challenge of reducing CO_2 emissions. The creation of strategic alliances to develop low carbon technologies thus served to protect

their economic strength. More broadly, car and oil companies adopted a proactive strategy towards climate change mitigation by enhancing their environmental profile, creating a 'green' image (e.g. BP's beyond petroleum campaign), and investing in renewable energy technologies (Levy and Egan, 2003: 821; Levy and Kolk, 2002: 285-289). Some of the main technological innovations developed through these partnerships are discussed below.

Towards Low Carbon Technologies?

Through the strategic partnerships mentioned above, carmakers and oil companies invested in a range of low carbon technologies, including hydrogen fuel cell, electric, hybrid and alternatively-fuelled cars. The contributions of these technologies to the implementation of the ACEA agreement are briefly evaluated below.

Hydrogen fuel cell cars were considered a promising technological option for reducing car CO_2 emissions. In 2000, Daimler-Chrysler, alongside Toyota and Honda, pledged to sell hydrogen fuel cell cars on the EU market in 2004. However these plans did not materialise due to high costs and technical barriers (Kågeson, 2005: 13). Fuel cell technologies were not commercially viable, and therefore remained a possible long-term solution for reducing car CO_2 emissions (for discussion see e.g. King, 2007; Dennis and Urry, 2009: 74-76; Mikler, 2009: 65; Nieuwenhuis and Wells, 2003: 87-92; OECD, 2004: 59; ten Brink, 2010: 200-201).

Fully electric cars were also explored by a number of carmakers as a possible technological alternative for reducing CO_2 emissions. Electric cars were by no means a new invention. They were first produced in the 19th century, and competed with the internal combustion engine for technological domination. This battle was clearly lost, as internal combustion engine cars came to dominate car markets world-wide (Dennis and Urry, 2009: 28-29). Notwithstanding, some carmakers, notably GM and Ford, invested in these technologies. However, GM stopped producing electric cars in 1999, and by 2002 Ford pulled out of its Th!ink project, and focussed its resources on developing hybrid and fuel cell technologies (Nieuwenhuis and Wells, 2003: 82-83). These developments reflected a consensus in the car industry at the time, that electric cars would 'not replace the mainstream car' (Nieuwenhuis and Wells, 2003: 82). Electric

cars gained popularity again towards the late 2000s, and were considered a viable technological option for mid/long-term CO_2 emissions reductions (see King, 2007: 50-51; Wells et al, 2010: 43-46 for discussion). The Commission's strategy on green cars, published in 2010, singled out electric cars as a promising technological option for achieving mid-term reductions in car CO_2 emissions (CEC, 2010a: Article 2.7).

Electrical hybrid cars were considered to be another promising technological option for reducing CO_2 emission. Petrol-hybrid cars were first introduced on the EU market in 2000 by the Japanese carmakers Toyota (Prius) and Honda (Insight) (Nieuwenhuis and Wells, 2003: 83). By 2003, Audi, Volkswagen, Ford, GM and Daimler-Chrysler all announced plans to introduce hybrid cars (Austin et al. 2003: 20; Nieuwenhuis and Wells, 2003: 85). It was estimated that hybrid cars could reduce CO_2 emissions by 50% in comparison with 2003 diesel engines, and provide carmakers with a competitive first-mover advantage. Thus, despite their high production costs, they were (optimistically) projected to account for 10% of the global car market by 2010 (Austin et al., 2003: 20-21). However, by 2004 the market share of hybrid cars in the EU-15 was a mere 0.06% (Kågeson, 2005: 12). The likelihood that hybrid cars would significantly contribute to carmakers efforts to achieve the voluntary commitment remained 'extremely small' due to high costs and low consumer demand (Kågeson, 2005: 15). Thus, hybrid cars did not significantly contribute to the implementation of the ACEA agreement. More recent developments in hybrid technologies include the development of diesel-hybrid cars which are likely to be introduced on the EU market from 2012 (Nieuwenhuis, 2007: 10). Hybrid cars are expected to make a more significant contribution to carmakers CO_2 emissions reductions efforts between 2012 and 2020 (ten Brink, 2010: 201).

Other technological innovations included the adoption of alternative fuels such as biofuels, Compressed Natural Gas (CNG), and Liquid Petroleum Gas (LPG) (see e.g. Nieuwenhuis and Wells, 2003: 75; OECD, 2004: 62-64 for overview of these). By 2003, ACEA sold over 40,000 alternatively-fuelled cars in the EU. However, their uptake was hindered by the lack of fuel infrastructure (CEC, 2005a: Article 2.5). Thus, by 2008, the market share of alternatively-fuelled cars was a mere 1.3% of new cars

sold in the EU (CEC, 2009b: Article 2.2). Therefore, their contribution to carmakers' CO_2 emissions reductions efforts was marginal. Although carmakers did invest in a range of low carbon technologies, the impact of these technologies on reductions in CO_2 emissions under the ACEA agreement was marginal. As illustrated in Figure 6.1, the above-mentioned technologies are expected to contribute to reductions in CO_2 emissions from 2010 onwards. However, carmakers' progress on the implementation of the ACEA agreement was mostly due to incremental technological innovations, as discussed below.

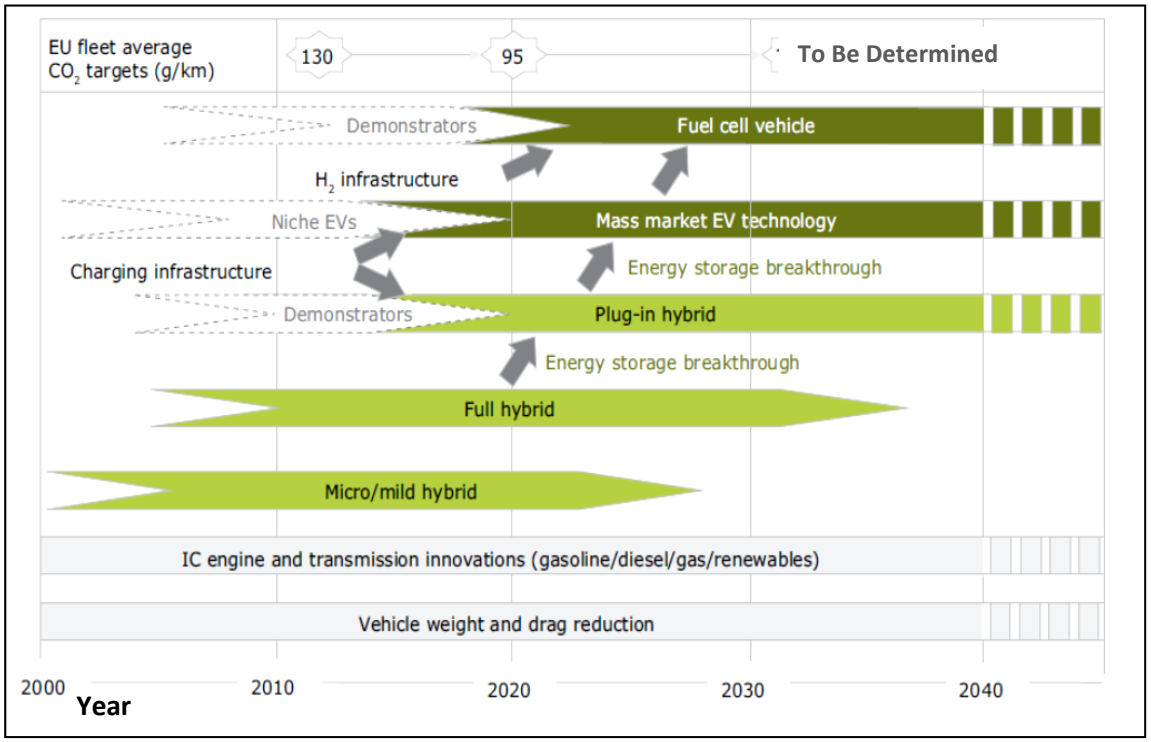

Figure 6.1: Potential of technological innovations for reducing car CO_2 emissions

Source: EEA (2011a: 55)

Incremental Technological Advancements

From the above, it can be seen that the adoption of new technologies did not significantly contribute to carmakers' CO_2 emissions reductions under the ACEA agreement. Instead, ACEA's progress was mostly the result of incremental

technological advancements (ten Brink, 2010: 186). This was not surprising, considering that the targets of the voluntary agreement required only incremental technological changes, relying on improvements in the internal combustion engine (Keay-Bright, 2000: 30). In 1998, ACEA expected direct injection petrol and diesel technologies to significantly contribute to its commitment (CEC, 1998d: p. 13). The market share of diesel-fuelled cars sold by ACEA nearly doubled, from 24% in 1995 to 47.5% in 2003 (CEC, 2005b: p. 11). By 2008, diesel-fuelled cars accounted for just over 50% of new cars sold in the EU, while the market share of petrol-fuelled cars declined from nearly 70% of all new cars sold in the EU in 2000, to under 50% in 2008 (CEC, 2009b: p. 3), as illustrated in Figure 6.2. Diesel engines are inherently more fuel-efficient than equivalent petrol engines (Kågeson, 2005: 11). However, between 2000 and 2008 the fuel efficiency of diesel cars improved by 6%, while the efficiency of petrol cars improved by 11%, due to advancement in direct injection petrol technologies. By 2008, the average CO_2 emissions of petrol and diesel cars were therefore comparable, with average emissions of 156.6 and 151.1 g CO_2/km, respectively (CEC, 2009b: Article 2.2).

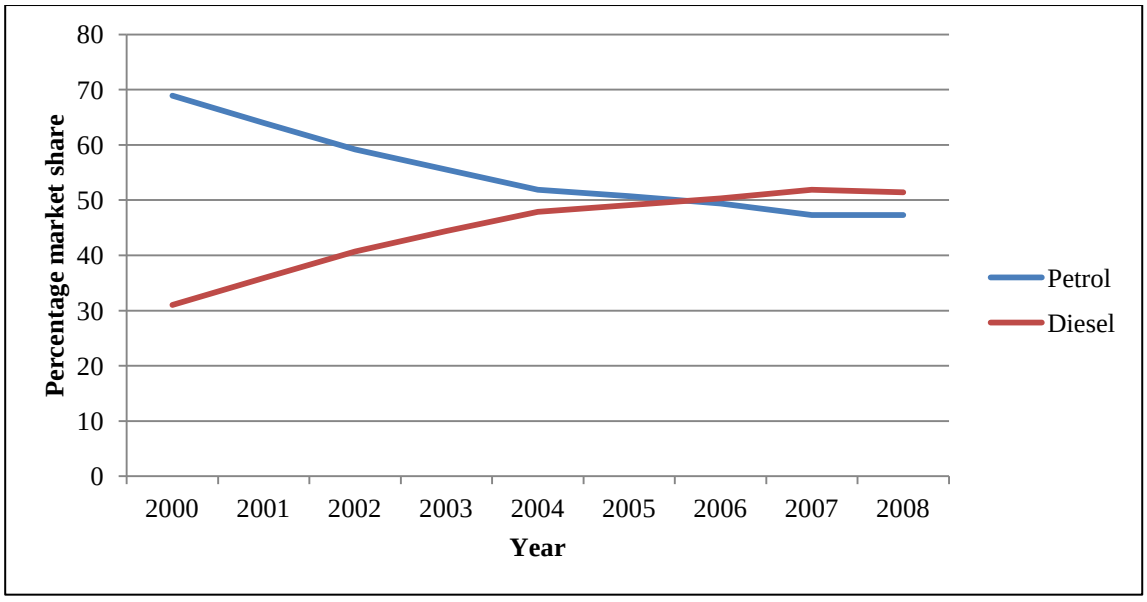

Figure 6.2: Market share of new petrol and diesel-fuelled cars (2000-2008)

Source: adapted from CEC (2009b: p. 3)

Further reductions in CO_2 emissions were achieved through the employment of a range of other incremental measures. These included the introduction of smaller cars such as Daimler-Chrysler's 2-seat Smart car and the Volkswagen Lupo 3L (Nieuwenhuis and Wells, 2003: 43), improvements in petrol and diesel engines, reduction of driving resistance, utilisation of lightweight materials and development of intelligent engine management and transmission systems (CEC, 2005a: p. 4; see also Kågeson, 2005: 16-18; Mikler, 2009: 64-65; Nieuwenhuis, 2007: 14-15; SRU, 2005: 7-8 for review of incremental measures). In particular, the downsizing of the car fleet through reductions in weight, engine capacity and power were seen as instrumental in achieving reductions in CO_2 emissions (Kågeson, 2005: 18). However, the downsizing of the car fleet proved to be a controversial matter, influenced by supply and demand-side considerations, as discussed below.

Steering Implementation? Consumer Demand

Consumer demand and market trends had an important effect on the implementation of the ACEA agreement. As observed by Bongardt and Kebeck (2006: 21):

> The success and failure of the ACEA Agreement is not only dependent on the supplied products but also on the acceptance of smaller engines and energy-efficient passenger cars on the demand side by the customers, the number of cars they buy and their use of these cars.

Two conflicting trends in demand can be noted. On the one hand, consumer demand shifted towards smaller, more fuel efficient cars. On the other hand, demand for larger, more polluting luxury cars and SUVs steadily increased throughout the implementation of the ACEA agreement, as illustrated in Figure 6.3. Some of the factors influencing these contradictory trends are examined below.

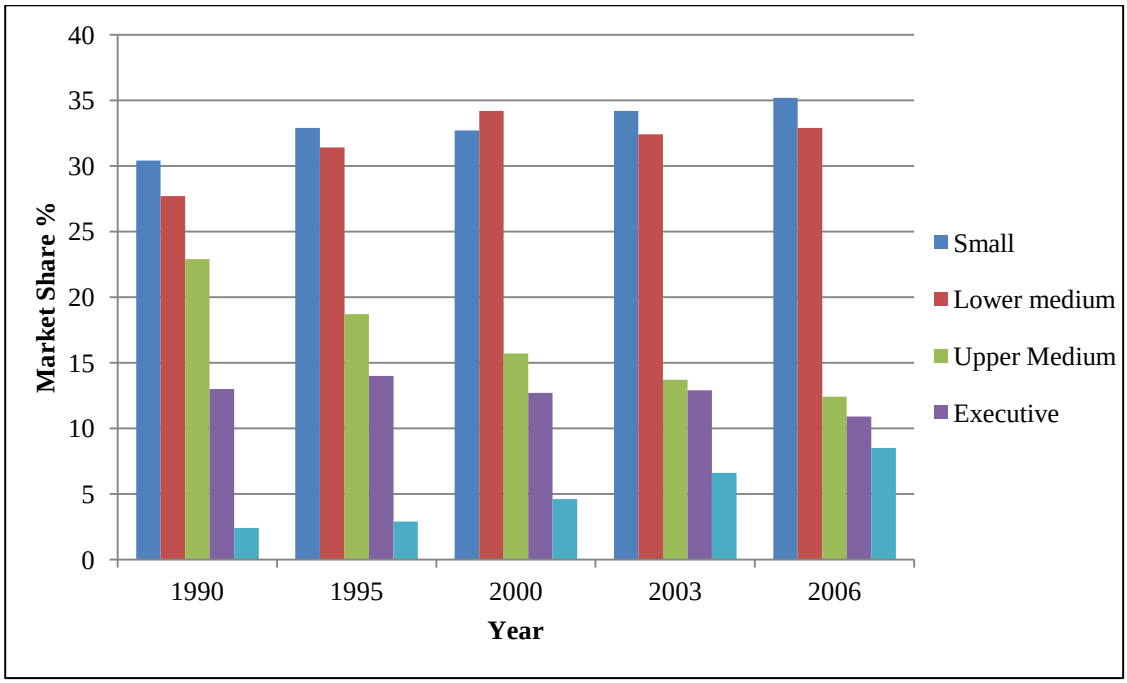

Figure 6.3: New car registrations in the EU-15 according to market segment (1990-2006) [7]

Sources: ACEA (2010b); Kågeson (2005: 6)

Fuelling Demand for Smaller Cars

Demand for smaller, more fuel-efficient cars increased throughout the implementation of the ACEA agreement. The market share of new cars emitting 120 g CO_2/km or less, and those emitting between 120 and 140 g CO_2/km steadily increased between 1998 and 2008 (CEC, 2005a: 7), as illustrated in Figure 6.4. This trend was influenced by the availability of more fuel-efficient cars, including the introduction of car models emitting 120 g CO_2/km or less in 2000, as required under the voluntary agreement (CEC, 2001c: p.6). Further, ACEA conceded that fiscal measures at the Member-State level had an impact on demand for more fuel-efficient cars (ACEA, 2010c), as did labeling schemes (ten Brink, 2010: 186). However, the impact of these interventions remained difficult to assess (CEC, 2007g: Article 2.2.3; ten Brink, 2010: 186). Another explanation suggests that the rise in the market share of smaller, less polluting cars was the result of an

[7] More recent data was not comparable, as ACEA incorporated data on SUVs and luxury cars into other vehicle categories.

increase in the number of cars per household, as second cars tend to be smaller (Kågeson, 2005: 6; Bongardt and Kebeck, 2006: 32). Thus, this trend does not necessarily reflect an overall drop in car CO_2 emissions, but could be indicative of increased demand for mobility.

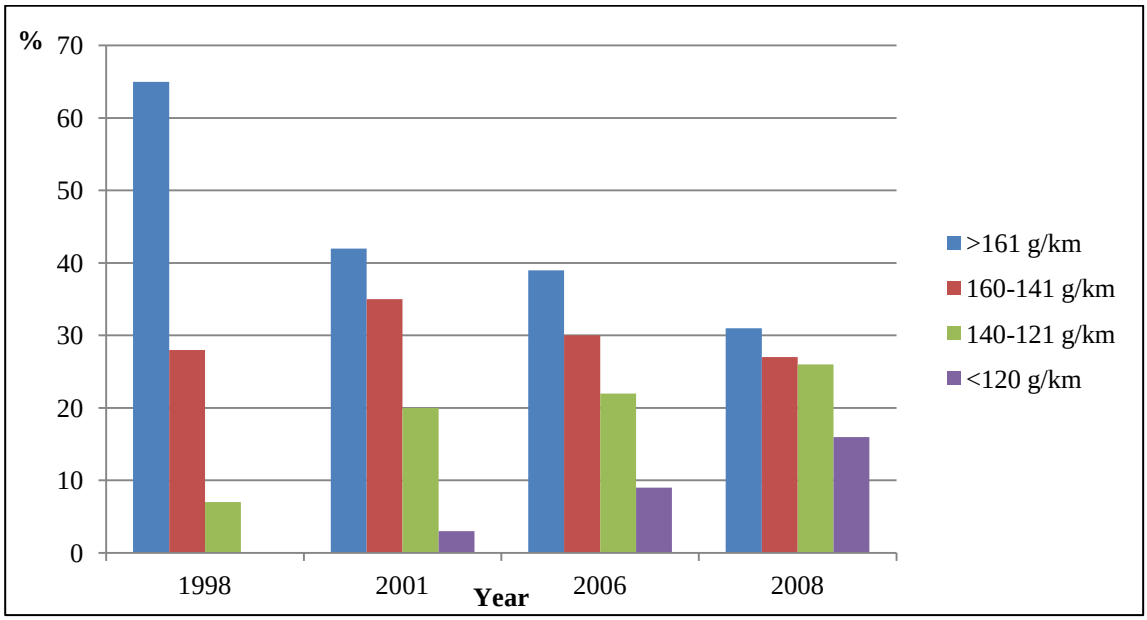

Figure 6.4: Market share of new cars registered in the EU according to CO_2 emissions
Source: ACEA (2011c)

Another factor which influenced consumer demand was rising fuel prices. Between 1999 and 2000, oil prices tripled, raising concerns about the oil-dependency of the European economy in general, and the transport sector in particular (European Parliament Directorate General for Research, 2001). The oil crisis and the wider economic crisis had a positive impact on efforts to reduce CO_2 emissions, and stimulated demand for more fuel-efficient cars (Bongardt and Kebeck, 2006: 34). Accordingly ACEA reduced its CO_2 emissions by 2.9% between 1999 and 2000 (CEC, 2001c: Article 2), and by a further 2.5% in 2001 (CEC, 2002a: Article 2.2). In comparison, average reductions in car CO_2 emissions were 1.5% per year between 1995 and 1999 (CEC, 2000d: Article 2), and 1.2% in 2002 (CEC, 2004b: Article 3.2). Despite the positive environmental impact, the sharp increase in fuel prices resulted in wide-spread protests of private and commercial motorists across the EU (Doherty et al., 2003). Protesters and the OPEC alike called on EU Member States to reduce fuel taxes

(European Parliament Directorate General for Research, 2001). In response, several Member States including France, the UK, Italy and Germany eased their fuel excise duties (EED, 8.6.2000; ENDS Report, 306: 16; 308: 19). The real cost of fuel subsequently decreased between 1999 and 2010, as mentioned earlier in this chapter (T&E, 2011b: 4). A report by T&E noted the positive effect of higher fuel prices on reducing demand for car use, and claimed that had governments kept fuel prices at 1999 levels, CO_2 emissions from road transport would have decreased by an additional 6% in 2010 (ibid.). However, raising fuel prices proved to be a contentious political matter, illustrating some of the complexities inherent in reducing car CO_2 emissions.

In response to the 2000 oil crisis, the Commission published a Green Paper on energy security (CEC, 2000c). The paper noted the oil-dependency of the European transport sector and the role of the car in this continued dependence (p. 15). Although car use was expected to increase by 16% by 2010, the Commission hoped the ACEA agreement would counteract the trend of rising fuel consumption. Still, it acknowledged that the agreement would not suffice for stabilising the transport sector's energy demands (p. 16), and called for the commercialisation of low-carbon technologies (p. 70). The Paper further envisioned the substitution of 20% of fuels in the transport sector with alternative fuels by 2020, an objective which was further pursued in a Communication on the matter in 2001 (CEC, 2001b). The Commission identified biofuels and natural gas as the main contributors to this objective, while it was projected that hydrogen could account for 5% of transport fuels by 2020 (p. 13). However, the Commission noted that these changes would not be easy to achieve:

> Any radical changes in fuel supply or engine technology for road transport face a number of problems. The population at large has got used to having at their disposal a car that has over the years become very cheap as has the fuel (particularly when compared to disposable income). Refueling is necessary only for every 400-600 km (or more) available everywhere and done in a few minutes. The car serves purposes from short distance shopping by one person in the local supermarket to taking the family on the annual (or semi-annual) holiday to the other end of Europe. In addition virtually no safety restrictions exist for parking or otherwise placing the car in spite of it carrying a large amount of highly flammable liquid. Few people would be ready to compromise much or any of the advantages offered by today's car (CEC, 2001b: p. 2).

This statement illustrated the difficulties the EU faced in governing car CO_2 emissions in light of the car and oil-dependencies of European society.

The 2000 oil crisis shed light on some important dilemmas in governing car CO_2 emissions. Firstly, it emphasised the oil dependence of the EU's transport sector. This problem was exacerbated due to reliance on imports from geo-politically unstable regions. Secondly, the oil crisis highlighted the structural dependence of Member States on revenues from oil taxes. Thirdly, it illustrated the politically-contested nature of raising fuel prices, and the unacceptability of these to car and oil-dependent consumers. Therefore, while higher fuel prices did result in a shift in consumer demand towards more fuel-efficient cars, this was not considered a politically viable option for achieving reductions in car CO_2 emissions. Furthermore, the demand for more fuel-efficient cars was counteracted by parallel demand for larger, faster cars.

Fuelling Demand for Larger Cars

Throughout most of the implementation period of the ACEA agreement, the average weight, engine power and capacity of new cars sold in the EU increased (CEC, 2010b: Article 2.3). To illustrate, between 1995 and 2003, engine power increased by 23%, car mass increased by 10%, and engine capacity increased by 5% (Kågeson, 2005: 20). Despite this increase in 'physical fleet characteristics' (CEC, 2004a: p. 5), ACEA reduced its CO_2 emissions by 11.9% between 1995 and 2003 (CEC, 2005b: Article 2), as illustrated in figure 6.5. Kågeson (2005: 20) estimated that ACEA could have reduced its CO_2 emissions by 20% over this period, had the characteristics of the car fleet remained constant. His findings are consistent with those of ACEA. ACEA claimed that its members reduced the average CO_2 emissions of new cars by over 20%, from 185 g CO_2/km in 1995 to 147 g CO_2/km in 2005. This progress was achieved through the use of lightweight materials, aerodynamics, engine and combustion efficiency, and low friction tyres, among other incremental measures. However, ACEA claimed that EU regulations on air quality and safety, and consumer demand for 'larger, more comfortable cars' had an adverse impact on its reduction efforts, so that in practice average CO_2 emissions of new cars was 160 g CO_2/km in 2005, an improvement of 13% from 1995 (ACEA, 2008e: 17).

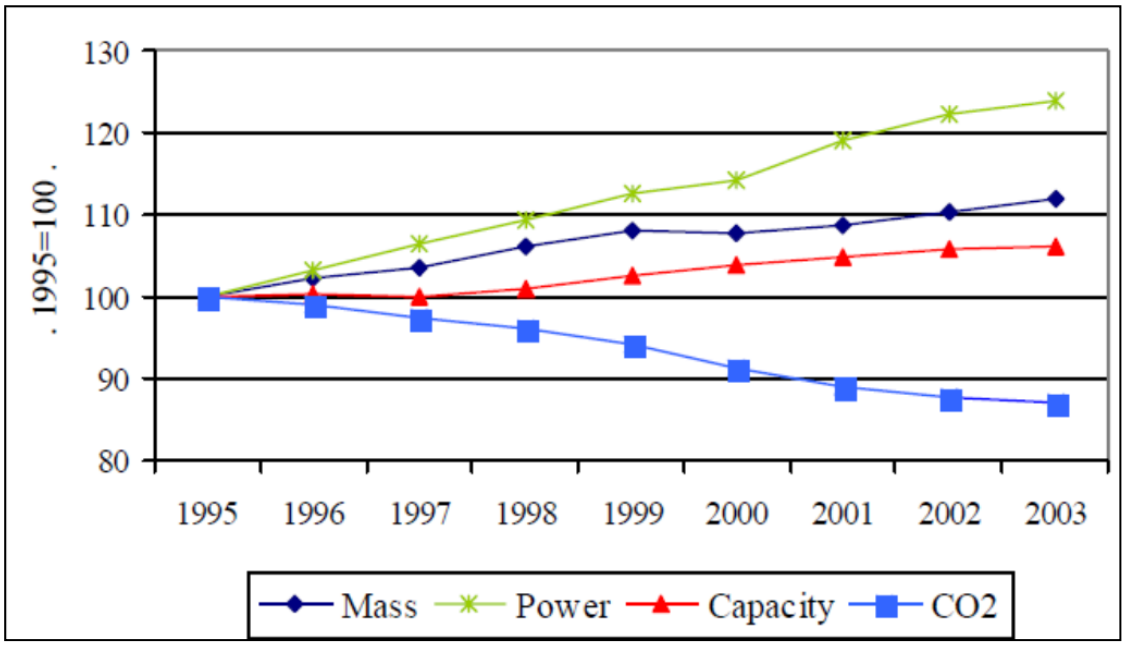

Figure 6.5: Physical fleet characteristics ACEA (1995-2003)

Source: CEC (2005a: p. 10)

While ACEA blamed safety and other regulatory requirements for impeding carmakers efforts (CEC, 2004a: Article 1.3), these claims were disputed by environmental NGOs and the Commission alike. The Commission believed that the effects of regulatory requirements on car weight were 'if at all, potentially small and would therefore be negligible for the average specific CO_2 emissions' (CEC, 2004a: 1.3). Rather, considerations of supply and demand were said to affect these changing car characteristics (Kågeson, 2005: 20). The trend towards larger, more powerful cars was evident across all market segments, and was associated with increasing power and comfort which made cars more attractive to consumers, and thus stimulate demand (Kågeson, 2005: 20).

In particular, the rising market share of SUVs was said to hinder the implementation of the voluntary agreement. The Commission observed that the uptake of larger, more polluting cars could be explained 'by the evolution of manufacturers' offer and consumer demand, and by the measures adopted to influence these two parameters' (CEC, 2007b: Article 1.2.2). The promotion of SUVs and luxury cars by

carmakers can at least partially be explained by the fact that these larger, more polluting cars, were also more profitable than cars in the less carbon-intensive market segment (Austin et al., 2004: 10). The rising demand for SUVs, and the increase in number of ACEA member producing these, revealed that 'individual producers cannot abstain from participating in promising markets' (Kågeson, 2005: 20-21). Car dealers also had an interest in promoting the sales of more polluting, but also more profitable cars (Kågeson, 2005: 21). The environmental performance of carmakers was therefore compromised by interests of promoting economic profitability.

In an evaluation of the ACEA agreement, Bongardt and Kebeck (2006: 30) concluded that ACEA could improve its environmental marketing strategies in order to raise awareness and ensure greater public acceptance of environmentally-friendly technologies. However, as noted above, carmakers had ulterior motives in promoting the uptake of more profitable, carbon-intensive cars. A UK survey conducted by Friends of the Earth in 2005 showed that carmakers disproportionately advertised the most polluting, 'gas-guzzling' cars. 35.8% of all car advertisements surveyed were for cars in the most polluting emissions band (F), while only 3.1% of adverts were for cars in the cleanest bands (A and B) (Friends of the Earth, 2005). Friends of the Earth campaigner, Tony Bosworth, said the car industry was 'encouraging motorists to buy gas-guzzling vehicles, despite mounting concerns about climate change and the rising price of oil, contradicting their claims to care for the environment' (Friends of the Earth, 2005).

The interconnectedness of supply and demand can thus be noted. As Nieuwenhuis (2007: 28) observed, the 'customer can only choose from what he or she is offered by manufacturers and dealers in the market place'. His observation is strengthened by a study Commissioned by DG Environment, which found that

> [C]onsumers change their behaviour in clear consistency to the trend that was supported by the offered model range of the manufacturers, e.g. consumers adapted to the development towards higher engine power (Mehlin et al., 2004: 79).

Nevertheless, changing consumers' preferences and demand could be a difficult task, as observed in a report by DG Industry:

> [C]ars and the relationship of owners towards them appear to run much deeper than their practical value in use. Today's car manufacturers offer a startling variety of different models to satisfy the needs of their customers. Those needs include rational deliberations like the wish for spacious family vans. However, cars have become also an element of style through which their owners can express their individuality. The choice in car models reflects this clearly as does the wide variety of supplementary interior and exterior car equipment. Cars have a social signaling function, proving that one can afford a special car or even more than one. This fact certainly reflects a country's wealth but also its general tendency to treat cars as a status symbol (CEC Directorate General Enterprise and Industry, 2004: 181).

The question of supply and demand therefore remained a 'chicken and egg' dilemma. Carmakers had conflicting interests in implementing the voluntary agreement. On the one hand, they needed to reduce CO_2 emissions from new cars. On the other hand, they needed to ensure their economic competitiveness, which was better served by the sales of more carbon-intensive cars. At the same time, consumer demand was influenced by the availability of different car models, advertising campaigns, and the social status provided by the car.

So far, this chapter explored the efforts of policymakers to ensure the implementation of the ACEA agreement, the strategies of carmakers, which were mainly comprised of incremental technological measures, and the conflicting trends in supply and demand of new cars. The following section examines in some detail actual progress on the implementation of the voluntary agreement.

Driving towards Implementation?

ACEA's progress on the implementation of the agreement is illustrated in Figure 6.6. Three stages can be distinguished in the implementation of the voluntary agreement. In the first stage, from 1998 to 2003 ACEA made progress on reducing its CO_2 emissions and the voluntary approach, and optimism regarding the success of the agreement abounded. In the second stage, from 2004 to 2006 ACEA's progress stalled and initial optimism was replaced with growing calls for mandatory legislation. In the third stage, from 2007 to 2008 ACEA made sharp reductions in CO_2 emissions, in light of the imminent introduction of mandatory legislation, as discussed in Chapter 7. This section

examines some of the factors that influenced these developments in the implementation of the voluntary agreement. It then examines the efforts of individual carmakers, and concludes with the observation that the voluntary agreement did not deliver the expected results. The EU was consequently required to reformulate the voluntary approach.

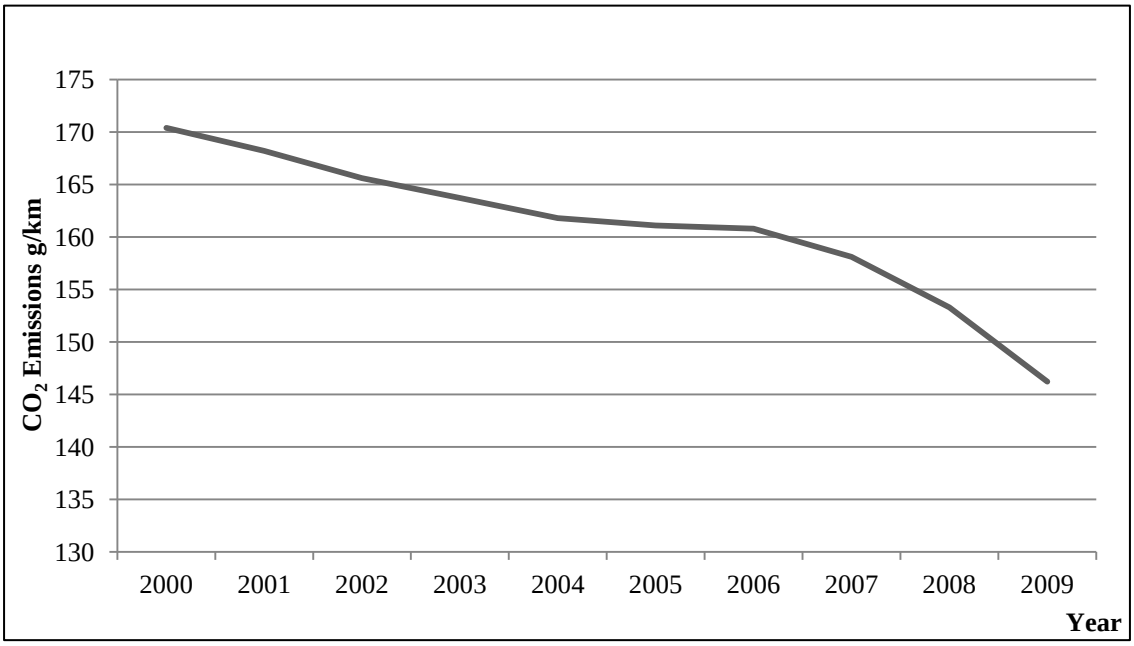

Figure 6.6: ACEA's progress on reducing new car CO_2 emissions (2000-2009)

Source: CEC (2010b: Table 7)

Implementation Phases

In the first phase of implementation, from 1998 to 2003, ACEA made good progress towards the implementation of the voluntary agreement. ACEA met the interim target range of 165-170 g CO_2/km set for 2003 already in 2000, and by 2003 it exceeded these targets (CEC, 2005b: Article 9). The rising market share of less-polluting cars, and the shift to diesel compensated for increased demand for more polluting cars, and lower-than-average reductions in the mid-size market segments (CEC, 2005a: 24-25). Also, as mentioned above, the 2000 oil crisis had a positive impact on the implementation of the

agreement. However, in order to meet the 140 g CO_2/km by 2008, all ACEA members needed to increase their reduction efforts. The Commission's progress report for 2003 stated that ACEA would need to reduce its average CO_2 emissions by 2.6% per annum between 2004 and 2008 (CEC, 2005a: 5), in comparison with an average of 1.5% reduction per year between 1995 and 2002 (CEC, 2004b: 3). ACEA stressed that this target was 'extremely ambitious, both technically and economically' (CEC, 2005a: Article 5.2). Although the Commission from the outset anticipated that reduction efforts would increase over time, it became evident that additional measures were needed in order to achieve the Community target of 120 g CO_2/km by 2010 (CEC, 2004b: 3). The first calls for the introduction of mandatory legislation then appeared in late 2003, as discussed in Chapter 7.

In the second stage of implementation from 2004 to 2006, ACEA's efforts to reduce CO_2 emissions diminished. In 2004, ACEA reduced its emissions by 1.2% from 2003 levels (CEC, 2006b: Article 2.1.1 com). In 2005 and 2006, ACEA's average emissions remained almost unchanged, from an average of 161.8 g CO_2/km in 2004, emissions dropped by 1 g CO_2/km to 160.8 g CO_2/km in 2006 (CEC, 2010b: Article 2.4). Several possible reasons for this slowdown can be discerned. Firstly, the stagnation in emissions reductions can partially be explained by the increasing size, weight and engine power of new cars sold in the EU (although average engine capacity slightly decreased between 2004 and 2006) (CEC, 2010b: Article 2.3). Secondly, early reductions through incremental measures, and particularly the uptake of diesel technologies, achieved their potential, and the 'low hanging fruit' of implementation had been picked, requiring more ambitious efforts from carmakers. Thirdly, ACEA blamed the weak economic climate in the EU, and falling registrations and cost of new cars, alongside 'mounting regulatory burden' for its lack of progress (CEC, 2005a: 4.7). These factors, ACEA claimed, resulted in the thinning of profit margins for the European car industry, affecting carmakers' ability to invest in R&D in order to promote their competitiveness and environmental protection alike (ibid.). Fourthly, between 2004 and 2006 calls for the introduction of mandatory legislation increased (as discussed in detail in Chapter 7). In light of this regulatory threat, it is possible that ACEA's motivation to comply with the voluntary targets dwindled. By 2005, although

carmakers 'reconfirmed their firm determination to make the best possible efforts to live up to their CO_2 commitment', they could no longer ensure that they would meet the voluntary targets (CEC, 2005a: Article 5.2).

Meanwhile, environmental NGOs and investors stepped up pressure on carmakers. A report for the World Resource Institute (Sauer et al., 2005) raised concerns regarding the transparency and effectiveness of the ACEA agreement. In particular, the report stated that the agreement did not disclose the commitments and progress of individual carmakers to the agreement. This, the report claimed, posed a risk for investors, did not deter free-riding and could compromise the effectiveness of the agreement. The report called for disclosure of data from individual manufacturers in order to protect investors and ensure the accountability and transparency of the agreement. This concern was shared by environmental NGOs. In 2006, T&E began publishing annual reports on carmakers' progress on reducing CO_2 emissions. T&E was critical of the Commission's failure to publish data on the progress of carmakers in general and individual manufacturers specifically. In its report on carmakers' progress for 2005, T&E asserted that carmakers were not on track to meeting the voluntary agreement (T&E, 2006: 3). Further, for the first time since the voluntary agreement began in 1998, T&E obtained in 2006 data on the progress of individual carmakers for 2005. It claimed this information was important in order to hold carmakers accountable for the failure of the agreement (T&E, 2006: 4).

By early 2007, any remaining hopes for the voluntary agreement diminished, as the Commission presented plans for the introduction of mandatory legislation (as discussed in Chapter 7). Conversely, the third stage of reductions in car CO_2 emissions, from 2007 to 2008, was characterised by a sharp reductions of CO_2 emissions. In 2007 and 2008, ACEA reduced its CO_2 emissions by over 7 g CO_2/km (CEC, 2010b: Article 2.4). The sharp increase in ACEA's reductions efforts can be attributed to pre-emptive actions in response to the expected introduction of mandatory legislation, the economic crisis of 2008, and the introduction of technological innovations (CEC, 2010b: Article 2.2; T&E, 2009b: 5).

Carmakers' Progress on the Implementation of the ACEA Agreement

Overall, throughout the implementation of the voluntary agreement, ACEA reduced the average CO_2 emissions of new cars sold by its members by approximately 14%, from 178 g CO_2/km in 1998, to 153.3 g CO_2/km in 2008 (CEC, 2006b: Table 1; CEC, 2009b: Article 2.4). ACEA therefore failed to meet the voluntary target of 140 g CO_2/km by 2008. Differences were noted in the implementation efforts of ACEA members, as illustrated in Table 6.2. This table ranks carmakers from lowest to highest emitters in 2007. From the table, it can be seen that in 2007 only PSA Peugeot Citroën and Fiat were on track to meeting the voluntary targets, followed by Renault and Toyota. Data published by T&E confirmed that in 2008 only Fiat and PSA Peugeot Citroën met the targets of the voluntary agreement (T&E, 2009b: 10). The manufacturers of larger luxury cars, such as Daimler, BMW, and Porsche significantly exceeded the 140 g CO_2/km target. Thus, it can be seen that the voluntary agreement benefited the manufacturers of more carbon-intensive cars, as it gave them freedom to continue producing profitable, yet more polluting car models.

Car company	CO_2 emissions g/km		% Change 2000-2007
	2000	2007	
PSA Peugeot Citroën	161.1	141.1	- 12.4
Fiat	156.4	141.3	- 9.6
Renault	160.3	146.4	- 8.7
Toyota	169.7	149.2	- 12.1
General Motors	163.5	155.9	- 4.7
Hyundai	186.2	160.5	-13.8
Ford	183.1	161.8	- 11.6
Volkswagen	165.3	163.4	-1.1
BMW	205.8	170.3	- 17.3
Daimler	200.2	180.9	-9.6
MG Rover	177.5	186.3	+ 5
Porsche	277	285.3	+ 3
Average	**170.9**	**157.7**	**-7.8**

Table 6.2: ACEA Members' reductions in CO_2 emissions (2000-2007)

Source: adapted from ten Brink (2010: 188)

Comparing the percentage reductions in average CO_2 emissions of individual carmakers, a mixed picture of implementation can be depicted. Figure 6.7 illustrates that some manufactures of larger, luxury cars made bigger percentage reductions in CO_2 emissions than manufacturers of smaller cars. Hence, their relative contribution to the implementation of the voluntary agreement was greater. In particular, BMW's percentage reduction was the largest of all ACEA members, and surpassed efforts made by PSA Peugeot Citroën, Toyota Ford and Fiat. Daimler, who produced some larger luxury cars, also reduced its emissions by an above-average 9.6% between 2000 and 2007. In contrast, General Motors and Volkswagen's reductions efforts were below average, while MG Rover and Porsche actually increased their emissions over the implementation period of the ACEA agreement. The figure illustrates the mixed implementation efforts of carmakers, regardless of the size of the cars they produced. However, it also strengthened the observation made above that the ACEA agreement advantaged the manufacturers of luxury cars and SUVs, since MG Rover and Porsche

specialised in the production of these car models. Thus, it can be seen that the ACEA agreement did not mitigate free-riding among carmakers. Furthermore, even the most ambitious reduction efforts made by BMW and Hyundai were not sufficient to achieve the average 25% reductions in CO_2 emissions envisioned under the voluntary agreement.

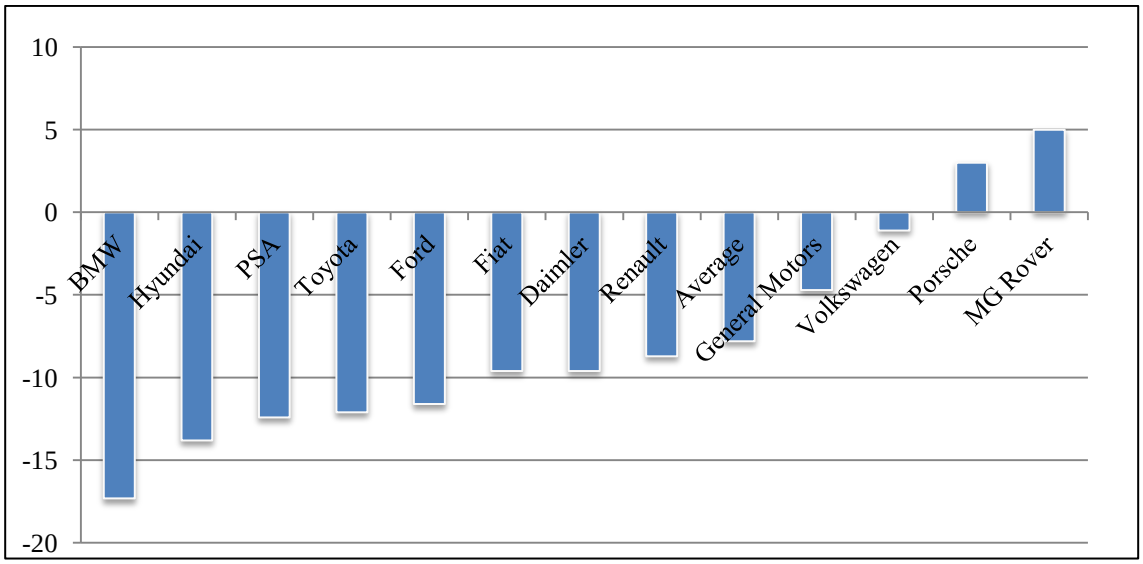

Figure 6.7: Percentage reductions in CO_2 emissions for ACEA members (2000-2007)

Source: adapted from ten Brink (2010: 188)

In summary, it can be seen that the voluntary agreement did not deliver the expected reductions in car CO_2 emissions. Its effects on technological innovation were questionable, although it did allow carmakers a lead-in time to promote R&D into low-carbon technologies. Moreover, the agreement did not deter free-riding, so that carmakers did not make equal efforts to reducing their CO_2 emissions. In terms of environmental effectiveness, ACEA's efforts were insufficient to counteract the trend of rising CO_2 emissions from the EU transport sector. CO_2 emissions from this sector increased by 27% from 1990 to 2009 (EEA, 2011: 4), while demand for car use increased by 23% between 1995 and 2009 (ibid., p. 43), contributing significantly to rising transport CO_2 emissions. Thus, the challenge of reducing car CO_2 emissions remained a topical problem on the EU's policy agenda, and necessitated the reformulation of the voluntary agreement, as discussed in Chapter 7.

Conclusions

This chapter illustrated some of the political, economic and social complexities involved in reducing car CO_2 emissions. The chapter began with a review of measures taken by policymakers to secure the implementation of the three pillars of the Community strategy to reduce CO_2 emissions from cars. The implementation of the labelling scheme, fiscal measures and the monitoring of the voluntary agreement were discussed. It was argued that the implementation of the labelling scheme and fiscal measures was at best patchy. Therefore, the voluntary agreement remained the EU's primary instrument for reducing car CO_2 emissions.

Carmakers efforts to reduce their CO_2 emissions were then discussed. Carmakers formed strategic alliances with oil companies and other actors, and invested in a range of low-carbon technologies. This was seen as a defensive strategy to protect economic competitiveness, in light of the threat of climate change to the economic operations of the car and oil industries. However, it was argued that the majority of reductions in CO_2 emissions were the result of incremental technological advancements, such as the shift to diesel, and the potential of downsizing the car fleet.

Some contradictory trends in consumer demand were then outlined. On the one hand, the chapter noted that demand for smaller, more fuel-efficient cars increased throughout the implementation of the ACEA agreement. The supply of less carbon-intensive cars, as well as measures taken by Member States influenced this trend. Moreover, the connection between rising oil prices and demand for more fuel efficient cars was noted. Raising fuel prices was an effective way to reduce car CO_2 emissions. However, it was not a viable policy option as it was met with disapproval of car and oil-dependent road users.

At the same time as demand for more fuel-efficient cars increased, so did the mass, power and engine capacity of new cars. This trend was associated with additional comfort and safety measures to stimulate consumer demand. In particular, the growing popularity of luxury cars and SUVs was noted. Carmakers disproportionately advertised more polluting, but also more profitable cars, whilst consumers continued buying these

cars. Conflicts between economic and environmental interests, and interrelations between supply and demand were noted. These characteristics emphasised the economic, societal and environmental complexities inherent in car governance.

The chapter then examined in some detail the progress on the implementation of the ACEA agreement. Three phases of implementation were identified. In the first phase, up to 2003, ACEA made good progress on the reduction of CO_2 emissions. However, by 2003 it became clear that additional measures were needed in order to reduce car CO_2 emissions. In the second phase, between 2004 and 2006, ACEA's progress halted, as calls for mandatory legislation appeared. In the third phase, from 2007 to 2008 carmakers efforts increased due to the imminent introduction of mandatory legislation and the economic crisis which affected the EU. Overall, it was illustrated that the voluntary agreement failed to meet its targets. This necessitated EU action to reformulate the voluntary agreement, as discussed in the following chapter.

Chapter 7
Reformulating the Voluntary Agreement

Introduction

Calls for the introduction of mandatory legislation on car CO_2 emissions intensified from late 2003 onwards. Growing dissatisfaction with the voluntary approach and carmakers' progress (as discussed in Chapter 6), and ACEA's reluctance to accept a voluntary target of 120 g CO_2/km by 2012 were behind these calls. Member States, the EU institutions, the car industry and environmental NGOs were all engaged in political bargaining to ensure their respective interests were met in the reformulation of the agreement. The contestations and compromises among these competing demands resulted in the uptake of mandatory legislation on car CO_2 emissions in 2009 (European Parliament and Council of the European Union, 2009). The mandatory legislation marked the end of the voluntary approach to reducing EU car CO_2 emissions. However, as this chapter aims to illustrate, the agreed legislation accommodated the economic interests of the car industry in several ways. This was the result of heavy lobbying of carmakers, some Member States, and notably Germany, and pressure from DG Industry. This chapter therefore concludes that EU legislation on car CO_2 emissions was shaped through the continued contestations and compromises among demands for environmental protection and climate change mitigation, and the promotion of continued economic growth.

The chapter returns to the more-or-less chronological timeline followed in Chapter 5. However, the reader will note there is some overlap with the analysis provided in Chapter 6 (as discussed in the introduction of that chapter). The chapter continues by outlining the first calls for the introduction of mandatory legislation, which were made in 2003. It discusses carmakers response to these calls through the advocacy of an "integrated approach" to reducing car CO_2 emissions, which involved a range of measures and policy actors. This approach was incorporated into the reformulation process of the voluntary agreement through the workings of the CARS 21 high-level group in 2005. The process leading to the publication of the revised Community

strategy to reduce CO_2 emission from cars in 2007 is explored, and the Commission's proposal for mandatory legislation outlined. The chapter then examines the political bargaining that led to the publication of mandatory legislation in 2009, and the outcomes of these compromises. Finally, the chapter examines the implementation of the mandatory legislation between 2009 and 2010. It observes that carmakers' efforts to reduce CO_2 emissions significantly increased following the introduction of the legislation, and that increasingly the search for synergies between economic growth and environmental protection guided the EU's efforts to reduce car CO_2 emissions.

Rethinking the Voluntary Approach

Dissatisfaction with the voluntary approach to reducing EU car CO_2 emissions increased over time. From late 2003, it became apparent that ACEA had to increase its efforts to reach the 140 g CO_2/km targets (as discussed in Chapter 6). Calls for the introduction of mandatory legislation ensued. ACEA responded to these demands by supporting an "integrated approach" to reduce CO_2 emissions from cars, as discussed below.

Calls for Mandatory Legislation

In late 2003, calls for the introduction of mandatory legislation intensified. In the Environment Council meeting in December 2003, German Environment Minister Jürgen Trittin expressed concern that ACEA would not meet the 2008 target, and 'stressed the importance of exploring ways of meeting these targets' (Environment Council, 2003: p. 29-30). Environment Commissioner Margot Wallström said the Commission would examine the claims that the voluntary agreement was failing, and would not 'exclude alternative measures' if it became evident that carmakers were not honouring the voluntary agreement (Environment Council, 2003: 30).

The calls for the introduction of mandatory legislation were made in light of ACEA's reluctance to extend its voluntary commitments. To recall, under the terms of the ACEA agreement (as discussed in Chapter 5), the Commission said it would consider extending the voluntary approach if carmakers agreed to voluntarily reduce

their CO_2 emissions to an average of 120 g CO_2/km by 2012. This target was to be examined in the 2003 interim review of the agreement (CEC, 1998d: Article 2.5.4). Consultations between the Commission and ACEA began in September 2003 (CEC, 2004b: 10). In December 2003, ACEA presented the results of its review to the Commission. It claimed that while there was technological potential to fulfill the 120 g CO_2/km target by 2012 target, the costs would be 'prohibitive', and would have market-distorting effects, as well as a negative impact on European economy (CEC, 2005b: Article 5). Instead, carmakers called for an integrated approach involving other actors, including public authorities, fuel suppliers, and drivers. ACEA indicated that a reduction of 5% from the 140 g CO_2/km by 2008 levels, to 133 g CO_2/km by 2012 would be feasible (ibid.).

Environmental interest groups also called for the introduction of mandatory legislation. In a letter to Environment Ministers from October 2004, EEB and T&E called on ministers, the Environment Council and Parliament to introduce mandatory legislation by 2008, in order to ensure the 120 g CO_2/km target was met by 2010 at the latest (EEB and T&E, 2004). T&E said this target could be reached in a cost-efficient manner with existing technologies, while also reducing oil dependency and promoting innovation and job-creation in the Community (T&E, 2005c; 2005d). Thus, environmental NGOs promoted the search for synergies between economic growth and environmental protection.

In October 2004, the Environment Council discussed post-2008 measures to reduce car CO_2 emissions (Environment Council, 2004). In a presidency paper circulated ahead of the meeting it was noted that there was 'much support' among Member States for a second set of voluntary commitments with the car industry (Council of the European Union General Secretariat, 2004: Article 4.6). However, differences were noted among Member States, with some supporting the continuation of a voluntary approach, while others called for the introduction of mandatory legislation (Council of the European Union General Secretariat, 2004: Article 4.7). The European Parliament supported the introduction of mandatory legislation. In January 2005, the Parliament expressed concern that rising transport CO_2 emissions were jeopardising

GHG reduction efforts in other sectors, and called on the Commission to propose binding targets for CO_2 emissions reductions (European Parliament, 2005).

Pressure for action to reduce car CO_2 emissions increased in 2005, when the Kyoto Protocol came into force following Russia's ratification of the agreement. The Commission subsequently published a Communication on winning the fight against global warming (CEC, 2005e). The Communication noted that climate change mitigation

> [I]nvolves significant adjustments to our societies and economies, such as the restructuring of energy and transport systems. It is therefore imperative to use the most efficient and least-cost mix of adaptation and mitigation actions over time to meet our *environmental* objectives while maintaining our *economic* competitiveness (CEC, 2005e: Article 7, emphasis added).

In order to meet these objectives, the Commission advocated the enhancement of low-carbon technological innovation through the employment of market-based and flexible policy instruments (ibid., 7.3-7.4). The Communication identified improvements in car fuel economy and reduced reliance on car use as two important options for reducing CO_2 emissions (CEC, 2005e: Annex 3). European carmakers therefore came under increasing pressure to reduce their CO_2 emissions. These demands were addressed through the advocacy of an integrated approach to reducing car CO_2 emissions, as discussed below.

The Integrated Approach

In January 2005, Industry Commissioner Günter Verheugen launched a high-level group on a Competitive Automotive Regulatory System for the 21st Century (CARS 21). As discussed in Chapter 2, the group comprised EU and Member States' policymakers, representatives from the car and oil industries and minimal representation of environmental NGOs. The group was established in response to the difficult economic and regulatory climate in which the European car industry operated. Carmakers were under growing regulatory pressures, while suffering from declining profits. The objectives of the CARS 21 group were therefore to make recommendations for a regulatory framework to '*enhance global competitiveness and employment while*

sustaining further progress in safety and environmental performance at a price affordable to the consumer' (CEC Enterprise and Industry DG, 2006: 8, emphasis in original).

In its report from December 2005, the group recommended an integrated approach for reducing car CO_2 emissions, as earlier advocated by the car industry. This approach promoted participation and burden-sharing among all affected stakeholders, including car and oil companies, consumers and public authorities, while promoting the principles of 'better regulation' (CEC Enterprise and Industry DG, 2006: 25-28). The Commission hoped that the integrated approach would result in greater emissions reductions by 'exploiting the synergies of complementary measures and optimising their respective contributions rather than by focusing on improvements in car technologies alone' (CEC Enterprise and Industry DG, 2006: 27). The integrated approach included: the uptake of alternative fuels; improvements in car technologies; fiscal measures on cars and fuels; promotion of eco-driving; consumer information; and better traffic management (CEC Enterprise and Industry DG, 2006: 27-28). Thus, it aimed to address some of the complexities of reducing car CO_2 emissions, while reducing the burden of compliance on carmakers.

The integrated approach received a mixed reaction. ACEA welcomed the approach and said that the creation of the CARS 21 group underlined 'that the Commission takes seriously the competitiveness of European automobile manufacturers and the role European regulation plays in this context' (ACEA, 2006a: 1). Environmental NGOs, on the other hand were critical of the integrated approach. T&E called on the high-level group to propose a legally-binding roadmap to achieve the 120 g CO_2/km target by 2012, and longer-term targets in the range of 80-100 g CO_2/km (T&E, 2005e: 5). T&E claimed that carmakers could achieve the 120 g CO_2/km by 2012 through technical measures alone and that reduction through the integrated approach should be in addition to this target. T&E also criticised the car industry for shifting responsibility to oil companies, through the calls to introduce biofuels (T&E, 2005a). The European Consumer's organisation, BEUC said it feared that the integrated

approach played down the importance of reducing car CO_2 emissions, and called for the introduction of mandatory legislation (BEUC, 2006: 6).

In summary, the integrated approach can be seen as the carmakers' response to growing pressures to reduce CO_2 emission. The integrated approach unified carmakers and policymakers in their search for synergies between economic growth and environmental protection. Environmental and consumer groups were, however, critical of this strategy. Nonetheless, the integrated approach was internalised into the EU's efforts to reduce CO_2 emissions from cars, as discussed below.

The Revised Community Strategy to Reduce Car CO_2 Emissions

Due to increasing international calls for action on climate change and growing disillusion with the voluntary agreement, the Commission came under increasing pressure to propose new policy measures on car CO_2 emissions. Between 2005 and 2006, the Commission undertook a review of the Community strategy to reduce CO_2 emissions from cars (ten Brink, 2010: 187). This section continues by outlining the events leading to the publication of the revised Community strategy in February 2007, and its calls for the introduction of mandatory legislation to reduce CO_2 emissions from cars. The reactions of different policy actors to the proposal are then examined in detail.

Towards a Revised Community Strategy

In the interim progress report on the ACEA agreement, the Commission said it would launch a joint evaluation on measures to achieve the Community goal of 120 g CO_2/km in a "sustainable way", and would propose policy measures by the end of 2005 (CEC, 2005b: Article 5). A working group on 'the integrated approach to reduce CO_2 emissions from light-duty vehicles' was then set up under the second phase of the European Climate Change Programme in October 2005 (CEC Climate Action DG, 2011). The general objective of the group was to assist the Commission in the preparation of the impact assessment for the revised Community strategy to reduce CO_2 emissions from cars (CEC Environment DG, 2005: 3). The working group included Member State officials, representatives from the car and oil industries, and NGO

representatives. The group met five times between December 2005 and September 2006. The Commission also initiated a public consultation on the revised Community strategy between June and August 2006 (CEC Environment DG, 2006: Article 1.1). These participatory practices, nevertheless, served to endorse the integrated approach first advocated by carmakers in 2003, as the guiding principle of the EU's revised strategy to reduce CO_2 emissions from cars. The consultation, and the accompanying studies (TNO, 2006; Jokisch et al., 2006) were used to inform the Commission's revised Community strategy, although they were by no means the only determinants of this approach.

In June 2006, in its review of the EU's Sustainable Development Strategy, the European Council reinforced the 140 g CO_2/km by 2008 and the 120 g CO_2/km by 2012 targets (Council of the European Union General Secretariat, 2006: 10). In response, the Commission said it would introduce a legislative proposal on the matter in the second half of 2006 (CEC, 2006b: Article 6; CEC, 2006a: 15). However, inter-Commission disputes between DG Environment and DG Industry delayed the publication of the strategy (Smith, 2007a). In November 2006, Environment Commissioner Stavros Dimas acknowledged that it was unlikely that carmakers would reach the 140 g CO_2/km target, and called for the introduction of mandatory legislation, backed by fiscal penalties (Smith, 2006a). ACEA objected to these calls, and said that European carmakers were 'fully committed' to reducing car emissions through an integrated approach. ACEA claimed that mandatory legislation would jeopardise employment and economic growth, a claim often repeated by carmakers (ACEA, 2006b). ACEA's position was supported by Industry Commissioner Verheugen, who opposed mandatory legislation. Instead, Verheugen promoted the integrated approach, and favoured an emissions-trading scheme (EED11.12.2006; Euractiv, 2007). At the same time, Germany increased pressure on the Commission to propose measures that would not harm the competitiveness of German carmakers (EED, 23.1.2007; 30.1.2007; Hey, 2010: 214). These disputes required the intervention of Commission President José Manuel Barroso (Haigh, 2010, CO_2 from passenger cars p. 4). Deadlock in negotiations was broken following the publication of the Commission's Communication on climate change in January 2007. The Communication called on the EU to reduce its CO_2 emissions by

30% from 1990 levels by 2020, and re-instated the 120 g CO_2/km by 2012 target (CEC, 2007f, Article 5d).

The revised Community strategy to reduce CO_2 emissions from cars was published in February 2007 (CEC, 2007g). The strategy outlined the problem of rising car CO_2 emissions due to growing car ownership and use, which resulted in an increase of over 16% in passenger kilometers driven between 1995 and 2003 (CEC, 2007b: Article 1.2.1). At the same time, the size and power of new cars increased, while their price in real terms decreased, in order to stimulate consumer demand (CEC, 2007b: Article 1.2.2), as discussed in Chapter 6. The problem of rising CO_2 emissions, the Commission noted, was complex:

> Cars are an important part of the everyday lives of a large number of Europeans, and the automotive industry is a significant source of employment and growth in many regions of the EU. However, car usage has significant impacts on climate change (CEC, 2007g: Article 1).

In order to reconcile these competing economic, social and environmental demands, the Commission supported an integrated approach that promoted environmental protection, while enhancing economic competitiveness through eco-innovations and thus creating 'sustainable jobs in the Community' (CEC, 2007g: 3.1). Through the integrated approach the Commission expected to meet the EU's objective of reducing car CO_2 emissions to an average of 120 g CO_2/km by 2012. The Commission said it would propose a legislative framework 'if possible in 2007 and at the latest by mid-2008' to ensure EU-wide mandatory targets of 130 g CO_2/km were met by 2012 through improvements in car technologies. The additional 10 g CO_2/km were to be reached through complementary measures under the integrated approach (CEC, 2007g: Article 3.2). In addition, the Commission called on the car industry to sign a voluntary code of conduct on advertising by mid-2007, in order to encourage 'sustainable consumption patterns' (CEC, 2007g: Article 3.3.2).

Responses to the Revised Community Strategy

The revised Community strategy can be seen as a compromise among competing economic and environmental interests. Within the Commission, the strategy accommodated DG Environment's demands for mandatory legislation, while softening

targets in order to appease the requirements of DG Industry. Nonetheless, the strategy illustrated the 'increasing importance of climate change policies in Europe' (Smith, 2007b). As Smith noted, 'until just a few years ago legally binding environmental targets for the powerful EU car industry were unthinkable' (ibid.). ten Brink (2010: 194) argued that the Community strategy 'can be seen on the one hand as a necessary compromise to achieve a legislative outcome, and on the other hand as a major lobbying victory for industry'. This view was shared by environmental NGOs who were critical of the strategy, and especially of the weakening of the target from 120 to 130 g CO_2/km by 2012. A press release from T&E stated:

> The environmental movement was disappointed at what is the latest weakening of a standard first published in 1996. The 120 g/km target was first set for 2005, then moved to 2010, and put back again to the current 2012 (T&E, 2007e).

Carmakers expectedly opposed the initiative, saying it would harm their competitiveness, and therefore 'erode the economic strength of Europe' (ACEA, 2007e).

The EU institutions were largely supportive of the revised Community strategy. Commission President Barroso said the strategy would ensure the climate-leadership of the European car industry on the road to a low carbon economy. He said that while these demands would require efforts from the car industry, they would also open opportunities to preserve its long-term competitiveness (CEC, 2007f). The Environment Council also supported the introduction of mandatory legislation, although differences were noted among Member States with regards to the targets, with some greener Member States, and notably Denmark, calling for the 120 g CO_2/km by 2012 target to be met through technical measures alone (Environment Council, 2007). Within the European Parliament, disputes arose regarding the targets and deadline for implementation of the mandatory legislation (EED, 3.5.2007). Despite the continued disputes between economic and environmental interest groups, one thing was certain; the promotion of the legislative approach reflected the 'widely-held view that the voluntary agreements did not deliver and could not achieve the necessary emissions reductions' (ten Brink, 2010: 194).

Parallel to the publication of the revised Community strategy, the Commission published its opinion on the CARS 21 final report (CEC, 2007a). The Communication highlighted the economic difficulties of the European car industry. In particular, overcapacity of production, high production costs and low demand for new cars threatened the profitability of European carmakers. These factors, the Communication suggested, could result in the transfer of production to other countries, and loss of employment in the EU. The Communication stated that 'the Commission will carefully analyse the employment and competitiveness impacts of future regulatory activity' (Article 2). Thus, it became evident that tension between environmental protection and economic competitiveness was growing, and that legislation on car CO_2 emissions would require strong consideration of economic interests, in order to reconcile these competing demands, as discussed below.

On the Road to Mandatory Legislation

Throughout 2007, the Commission made efforts to agree on a legislative proposal to reduce car CO_2 emissions. These efforts were made in light of the European Council's calls for a '20-20 by 2020' climate and energy package in March 2007 (Council of the European Union, 2007: Article 32). The climate package called for a 20% reduction in CO_2 emissions from 1990 levels by 2020, and a target of 20% use of renewable energy (Wurzel and Connelly, 2011: 8). The Commission was provided with a renewed impetus to propose legislation on car CO_2 emissions. Following deliberation and negotiations among various policy actors, the Commission published a legislative proposal in December 2007. The positions of various actors in the negotiations of the proposal are discussed below. The outcomes of these negotiations and the details of the legislative proposal to reduce car CO_2 emissions are then outlined.

Towards a Legislative Proposal for Reducing Car CO_2 Emissions

In June 2007, the Environment Council reaffirmed its approval of the Community strategy. It called on the Commission to introduce legislation by the end of 2007, while ensuring an 'open and transparent process, closely involving Member States and other

key stakeholders' (Council of the European Union General Secretariat, 2007: Article 7). The Commission addressed this demand by launching a public consultation on the revised Community strategy between March and July 2007. The consultation was open to private citizen as well as organisations, and received a good response from carmakers, environmental NGOs, consumer organisations and other interested parties, who all had different opinions of the best means of achieving the objectives of the revised Community strategy.

By and large, the EU institutions and Member States agreed that mandatory legislation was necessary. The main point of contestation remained burden-sharing arrangements among carmakers. In the revised Community strategy, the Commission pledged that the legislative proposal would

> [B]e designed so as to ensure competitively neutral and socially equitable and sustainable reduction targets which are equitable to the diversity of the European automobile manufacturers and avoid any unjustified distortion of competition between automobile manufacturers (CEC, 2007g: 3.2).

In order to ensure sustainable and competitively-neutral legislation, the Commission launched an impact assessment to evaluate different policy options for achieving the 130 g CO_2/km target (Fergusson et al., 2007).

Three different types of targets were assessed in this study. A fixed emissions target of 130 g CO_2/km for all carmakers; a percentage reduction target; and a specific reduction target according to a utility curve based on either vehicle mass or footprint, where footprint refers to length x width of the car (CEC, 2007f). The first option favoured the manufacturers of smaller, less polluting cars; the second favoured environmental-laggards who had not previously reduced their emissions significantly; the effects of the third option on carmakers depended on the choice of utility parameter and slope of reduction curve (Fergusson et al., 2007: 30; ten Brink, 2010: 189-190). A slope of 0% represented a horizontal line, and thus uniform reduction efforts, whereas a slope of 100% was 'parallel to the best-fit line' (ten Brink, 2010: 195-196). According to ten Brink (2010: 195-196) the manufacturers of smaller cars preferred a slope of 20%-30%, whereas the manufacturers of larger cars preferred a slope nearer 80%. However, in order to avoid perverse incentives of increasing car weight or size, the

slope had to be 'considerably below 80%' (Fergusson et al., 2007: 31). The study commissioned by the Commission identified the third option of differentiated targets as the most desirable, due to considerations of both economic efficiency and environmental effectiveness (Fergusson et al., 2007: 30). Different compliance options were also evaluated in the impact assessment. The first, least flexible option entailed compliance for individual car models; the second was a manufacturer "bubble", or pooling, in which carmakers could meet an average target; the third option was a trading scheme which allowed carmakers the greatest flexibility (ten Brink, 2010: 191). Since the choice of utility parameter, slope and compliance instrument all had potential implications for carmakers' compliance costs, '[i]ntense debate and lobbying ensued' (ten Brink, 2010: 193).

ACEA claimed that the 2012 deadline and targets were unrealistic, and said it could at best meet a 135 g CO_2/km target by 2015 (ACEA, 2007a: 7). Notwithstanding, it supported a mass-based utility curve as opposed to a footprint-based curve, with a slope that would 'safeguard both diversity and social equality' (ACEA, 2007a: 6). ACEA understood diversity to mean 'that any legislative system must safeguard the diversity of our industry, as represented by ACEA, its members and their product portfolio'. Social equity, according to ACEA was understood to mean that any legislative proposal must respect the economic constraints of consumers. ACEA demanded that the impact of any legislative proposal on employment in the EU be assessed and fully considered (ACEA, 2007a: 6). Moreover, ACEA supported flexible implementation through manufacture "bubbles", but rejected a closed trading scheme (ACEA, 2007a: 7). This reflected the 'competitive viewpoint that it is better to pay more oneself than to pay a competitor' (ten Brink, 2010: 193).

In contrast, Environmental NGOs objected to a mass-based utility curve. T&E said

> [I]ronically, defining CO_2 standards by vehicle weight would eliminate weight reduction as a method of generating efficiency improvements, as carmakers would not be rewarded for making cars lighter. Lighter cars would be 'punished' with a tougher CO_2 target (T&E, 2007a: 5).

Thus, T&E claimed that by promoting a weight-based utility parameter, carmakers argued 'that heavy cars should be subject to weaker CO_2 standards than light ones'. Instead, T&E supported a fixed reduction target of 120 g CO_2/km by 2012. A second-best alternative was considered to be a footprint-based utility curve (ibid.). T&E's position was supported by Friends of the Earth (Friends of the Earth, 2007), the European Transport Safety Council (ETSC, 2007: 1) and other stakeholders.

The European Parliament also supported footprint as the utility function to determine CO_2 reduction targets. In a resolution from October 2007, Parliament called for a target of 125 g CO_2/km to be achieved through technical measures alone by 2015. Parliament also called for the introduction of a mid-term target of 95 g CO_2/km by 2020 (European Parliament, 2007). This proposal accommodated, on the one hand, carmakers' demands for longer lead-in times for new technologies. On the other hand, it addressed calls within the European Parliament, and especially the Environment Committee, to strengthen the environmental dimension of the strategy. ACEA welcomed the recognition of the need for sufficient lead-in time for new technologies, but said the proposed targets were too stringent (ACEA, 2007d). It called on the EU to introduce 'realistic carbon reduction targets' based on the integrated approach (ibid.). T&E welcomed the Parliament's calls for a mid-term target, and the support for the footprint-based utility parameter, but said that Parliament's resolution represented a U-turn on Parliament's long-standing support for the 120 g CO_2/km by 2012 target (T&E, 2007b).

Perhaps the fiercest disagreement over the details of the proposed legislation emerged among Member States. France and Germany in particular were embroiled in political conflict over the details of the legislative proposal. In November 2007, French environment minister Jean Louis Borloo objected to legislation that advantaged the manufacturers of larger cars over those who produced smaller cars. He said 'by virtue of the polluter pays principle, those with the biggest pollution should make the biggest progress' (Bounds, 2007). The French position was apparently endorsed in a letter from the French President Nicolas Sarkozy to German Industry Commissioner Verheugen (Bounds, 2007; EED, 15.11.2007). France was supported by Italy, Spain, Romania and

Slovenia, which produced smaller vehicles (T&E, 2007e). Germany, however, was engaged in fierce lobbying activity to protect the interests of German carmakers (EED, 13.8.2007; ENDS Report, 385: 5). German Industry Commissioner Verheugen sought to soften the proposal in order to accommodate the interests of German carmakers (Rankin, 2007). In order to 'prevent bickering' between DG Industry and Environment, the dossier was handed to the Commission's General Secretariat, headed by former Environment Commissioner Catherine Day (EED 10.11.2007; 18.12.2007).

The Proposal for Mandatory Legislation to Reduce CO_2 Emissions from Cars

In December 2007, the Commission published a legislative proposal on reducing car CO_2 emissions (CEC, 2007f). The proposal endorsed the 130 g CO_2/km by 2012 target set out in the revised Community strategy. It was based on the differentiation of targets for individual carmakers according to a mass-based utility curve. The Commission said that the 'differentiation of targets should encourage emissions reductions to be made in all categories of cars while recognising that larger emission reductions can be made for heavier cars' (CEC, 2007f: Article 12). Therefore, it proposed a slope of 60%, which was 'slightly more favourable towards smaller vehicle manufacturers' and partially addressed 'the perverse incentive for manufacturers to increase the weight of their cars in order to avoid significant emissions reductions' (ten Brink, 2010: 196). In order to allow carmakers flexibility in compliance, the Commission suggested the pooling of manufacturers (CEC, 2007f: Article 18). Compliance was to be ensured through the administration of fiscal penalties for carmakers who did not meet their targets by 2012. These were to rise over time, and reflect the degree of non-compliance (Article 22).

The legislative proposal can be seen as a compromise between economic and environmental interests. Although the proposal weakened the 120 g CO_2/km originally envisioned for 2005, it 'marked an end of the voluntary approach' (ten Brink, 2010: 195), and the beginning of a new era in EU car-CO_2 governance. However, the proposal was seen to advantage the manufacturers of larger cars, and especially German producers for several reasons (Hey, 2010: 215-216). Firstly, the 120 g CO_2/km target for 2012 was weakened by the adoption of the integrated approach. Secondly, the weight-based utility curve was 'intended to give some leeway to the makers of larger

and more luxurious cars, particularly the German manufacturers' (Haigh, 2010, CO_2 from passenger cars p. 6, see also Hey, 2010: 216). Thirdly, the levels of fiscal penalties were relatively low in the first two years, and allowed flexibility in compliance (Hey, 2010: 216).

Further, the Commission perceived the introduction of mandatory legislation as a prerequisite for the promotion of economic growth. In its proposal, the Commission acknowledged that the aim of regulation was

> [T]o create incentives for the car industry to invest in new technologies. The Regulation actively promotes eco-innovation and takes into account future technological developments. In this way, the competitiveness of the European industry is enhanced and more high-quality jobs created (CEC, 2007f, Article 13).

Thus, while the proposal did call for action on climate change, it was also concerned with promoting the economic competitiveness of the EU's carmakers. Furthermore, in the impact assessment accompanying the legislative proposal, the Commission noted that reductions in CO_2 emissions needed to be achieved in a cost-effective manner, without undermining demands for sustainable mobility. These considerations were important since 'cars are an important part of the everyday lives of a large number of Europeans and provide mobility, which is essential to European society and economy' (CEC, 2007c: Article 2.1). Thus, in its legislative proposal the Commission aimed to reconcile competing economic, social and environmental demands.

Conversely, carmakers increasingly perceived an international regulatory framework as a prerequisite for protecting their economic competitiveness. Ahead of the conference of the parties of the UNFCCC in Bali in December 2007, ACEA published a letter supporting a 'comprehensive agreement which our planet needs' (ACEA, 2007b). ACEA called for a 'sound and holistic' global agreement, which would shape the framework in which the car industry operates. ACEA said

> We are proud of our achievements in reducing greenhouse gas emissions from our vehicles and are ready to build upon them in pursuit of still better products. We shall be all the more successful if we can develop a partnership with policymakers based on a common vision of what our industry can achieve, how this could be enhanced by other policies and in what timeframe. Coherent public policies would, for example, encourage consumers to choose vehicles with carbon lowering technologies, boosting demand for advanced cars and for sustainable alternative fuels (ACEA, 2007b).

This statement illustrated that carmakers increasingly embraced action on climate change as an enabler of their continued economic prosperity. These developments will be discussed in more detail in Chapter 8. Despite this seeming pro-environmental shift, an intense process of contestation and compromise ensued in the pursuit of mandatory legislation to reduce car CO_2 emissions, as discussed below.

Arriving at Mandatory Legislation

Following the publication of the Commission's proposal for mandatory legislation on car CO_2 emissions, pressure increased across the board until legislation was finally agreed in late 2008 and published in 2009. The main points of contestation were the implementation timeline of the agreement, mid-term targets, level of fines for non-compliance, and the contribution of eco-innovations to reduction efforts (ten Brink, 2010: 197). This section examines the processes of contestation and compromise which led to the agreement on mandatory legislation. It then analyses the components of the legislation, and compares them to the Commission's legislative proposal. In so doing, this section aims to shed light on how processes of political bargaining shaped the uptake of legislation.

The Contested Road to Mandatory Legislation

The Commission's proposal for mandatory legislation was the 'target of intense lobbying, both from the automotive industry and Members States in which the manufacturers concerned are based' (ten Brink, 2010: 197). ACEA claimed that the proposed legislation did not offer a 'balanced framework to cut CO_2 emissions and to safeguard EU competitiveness and growth'. Instead, the proposal 'would effectively reduce the competitive strength of the European automobile sector and put car manufacturing in the European Union at risk' (ACEA, 2007d). Carmakers claimed that the mandatory targets would threaten their economic position, and hence have a knock-on effect on European economy and society.

Environmental NGOs were also critical of the proposed legislation, but for different reasons. T&E Director, Jos Dings, said the Commission weakened the 120 g

CO_2/km target originally envisioned in 1995. He also criticised the phasing-in of fines suggested in the proposal, and said it amounted to the postponement of implementation. As discussed above, environmental NGOs were critical of the mass-based utility curve, and said it eliminated incentives to reduce car weight (Greenpeace, 2008; T&E, 2007c). Dings said the legislative proposal would

> [B]oost the SUV arms race in Europe, rewarding carmakers for their climate-killing strategy of making ever heavier cars. In the long term this strategy will backfire meaning heavier cars, more CO_2 emissions and more accident deaths (T&E, 2007c).

Instead, environmental NGOs called for footprint-based targets to be implemented by 2012 without a phase-in period. Further, they supported the introduction of mid and long-term targets, and the administration of higher penalties for non-compliance (Greenpeace, 2008; T&E, 2008). Ahead of the Environment Council meeting on this matter in March 2008, Dings said the legislative proposal did not adhere with the EU's climate aims for 2020. He said 'the excuse is that we do not know what is feasible and what kind of car market that would lead to [...however...] only a binding target ensures that we get the innovation needed to get there'. Therefore, he called for mandatory targets of 80 g CO_2/km by 2020 and 60 g CO_2/km by 2025 (T&E, 2008).

Among Member States, Germany was the most vociferous and influential in watering down the proposed legislation. As Hey (2010: 215) notes:

> I have rarely observed such a furious, hostile and unified approach from nearly all quarters of the German political spectrum, including most mass media when the Commission proposal was published in late 2007 [...] The Commission was reproached from nearly all sides for launching an attack against the German car industry and for creating competitive advantages for French and Italian producers.

German carmakers and policymakers 'agreed on the need to water down the proposal' (ten Brink, 2010: 197).

The Environment Council debated the proposal in its meeting in March 2008. Differences were noted among Member States. Car-producing Member States supported amendments to the proposal that protected the competitiveness of their domestic carmakers. For example, Italy, whose carmakers manufacture smaller cars, supported uniform emissions targets, but said it would accept a reduction slope of 20-30%

(Council of the European Union General Secretariat, 2008a: p. 5). On the other hand, Sweden, whose carmakers produced larger cars, supported an emissions slope of around 65% (ibid., p. 13). Other Member States, and notably the Netherlands, supported more stringent legislation (ibid., pp. 7-8). In particular, disagreement ensued between Germany and France. The former claimed the proposal would harm the competitiveness of the manufacturers of larger cars, while the latter said it would disadvantage manufacturers of smaller cars (EED 3.3.2008). The Environment Council 'stressed the need to strike the right balance between, on the one hand competitiveness and competition neutrality and, on the other, the need to reduce CO_2 emissions from road transport' (Environment Council, 2008a: p. 14). In May 2008, ahead of the Environment Council's June meeting, the Slovenian Presidency published a report on the legislative proposal. The report noted that disagreement among Member States regarding the utility parameter, slope, implementation deadline, fines and long-term targets continued (Council of the European Union General Secretariat, 2008b). Due to these differences, the Environment Council meeting in June 2008 did not reach agreement on the matter (Environment Council, 2008b), and political bargaining continued.

A compromise between France and Germany was struck in June 2008. Ahead of the French Presidency of the EU, German Chancellor Angela Merkel and French President Nicolas Sarkozy reached an agreement which watered down the Commission's proposal through the phasing-in of implementation up to 2015, and weakened targets through the inclusion of eco-innovations in the reduction efforts (Hey, 2010: 216). According to some reports, Sarkozy was initially reluctant to accommodate Merkel's demands, but needed to ensure German support in order to promote the French agenda during its EU presidency (Spiegel, 2008; Rankin 2008). According to Moreno (2008), the agreement between France and Germany was influenced by lobbying efforts of Matthias Wissmann, President of the German association of carmakers, the VDA. A former German Transport Minister, Wissmann lobbied robustly in Germany, France and the European Parliament to weaken the legislative proposal. As observed by Moreno (2008):

> The compromise reached by Merkel and Sarkozy fit rather neatly with Wissmann's wishes. In the fight between German cars and climate protection, Wissmann wants the cars to win - and he has largely gotten what he wanted.

This compromise between France and Germany formed the basis for the legislation which was later adopted (Hey, 2010: 216).

Differences were also noted within the European Parliament. In January 2008, the Parliament reiterated its calls for the adoption of a 125 g CO_2/km target by 2015. This target, Parliament believed, allowed carmakers more time to comply with legislation, while ensuring affordability to consumers, and hence continued demand and economic viability (European Parliament, 2008: Articles 36-37). In September 2008, the European Parliament's Industry Committee supported the phased-in introduction of targets by 2015, as agreed by France and Germany (ten Brink, 2010: 198). However, the Parliament's Environment Committee rejected these calls and supported the implementation of the 130 g CO_2/km target in 2012 (European Parliament Environment Committee, 2008: Amendment 16). In response to the Environment Committee's report, German Environment Minister Sigmar Gabriel said that unlike French and Italian carmakers, German manufacturers could not meet the 2012 target. He said "We cannot and must not play off climate protection and the economy against one another" (Hawranek and Schwägerl, 2008). Negotiations between the Commission, the Council and the Parliament continued.

The Mandatory Legislation to Reduce CO_2 Emissions from Cars

Agreement on mandatory legislation was reached in the beginning of December 2008 (ten Brink, 2010: 198). The Parliament approved the text of the legislation later that month. Legislation was adopted by the Environment Council in April 2009, as part of the EU climate and energy package. Several changes were made from the Commission's original proposal, as summarised in Table 7.1. Firstly, it was agreed that the 130 g CO_2/km target envisioned for 2012 would be phased-in, so that 65% of newly-registered cars would have to comply in 2012, 75% in 2013, 80% in 2014, and 100% from 2015 onwards (European Parliament and Council of the European Union, 2009: Article 4). Secondly, the level of fines was reduced so that between 2012 and 2018 for the first additional g CO_2/km carmakers would pay an excess of €5 times the

number of cars sold, for the second g CO_2/km in excess €15, and for the third €25, following that each additional g CO_2/km would be fined at €95 times number of cars sold. From 2019, each g CO_2/km would incur a fine of €95 (European Parliament and Council of the European Union, 2009: Article 9). This concession favoured manufacturers who narrowly missed their targets, although it penalised laggard carmakers more heavily. Thirdly, the legislation allowed for eco-innovations to contribute up to 7 g CO_2/km towards each manufacturer's reduction efforts (Article 12), and established 'super-credits' rewarding cars emitting 50 g CO_2/km or less (Article 5). The legislation also approved derogations for manufacturers who produce less than 300,000 cars per year (Article 11). Under the legislation, from 2011, the Commission was required to publish a performance list including the progress of individual carmakers (Article 10). The legislation also set a mid-term target of 95 g CO_2/km by 2020, which was to be reviewed by the Commission in 2013 (Article 13.5).

Main point of contestation	Legislative proposal COM(2007) 856	Agreed Legislation Regulation 2009/443	Influenced by
2012 target	• 130 g CO_2/km by 2012	Phasing in of the 130 g CO_2/km target: • 65% of new cars sold in 2012 • 75% in 2013 • 80% in 2014 • 100% in 2015	• Lobbying of carmakers and Germany. • European Parliament also supported longer lead-in time.
Fines	• €20 per g/km x number of cars sold in 2012 • €35 per g/km in 2013 • €60 per g/km in 2014 • €95 per g/km in 2015	From 2012-2018: • 1st g/km: €5 x number of cars sold • 2nd g/km: €15 • 3rd g/km: €25 • Each additional g/km €95 • From 2019: €95 for each g/km	• Fines were eased for manufacturers narrowly missing targets, but penalised laggards.
Eco-innovations	• Encouraged, but did not count towards emissions reductions efforts	• Count for up to 7 g/km of reductions efforts • Inclusion of 'super credits' for cars emitting 50 g CO_2/km or less	• German lobbying efforts to ease burden on German carmakers
Long-term target	• Vision for 95 g CO_2/km by 2020, not set as target	• 95 g/km by 2020, to be reviewed by 2013	• Calls from European Parliament and environmental NGOs

Table 7.1: Main points of contestation and their resolution in the agreement on mandatory legislation to reduce car CO_2 emissions

Source: adapted from CEC (2007f) and European Parliament and Council of the European Union (2009)

Overall, the legislation constituted a compromise between competing economic and environmental demands. In particular, the legislation promoted the interests of the German car industry, which produced on average heavier cars and therefore struggled to meet stricter CO_2 emissions reductions targets (Hey, 2010: 211). These concessions were additional to the provisions made in the 2007 legislative proposal, which already took into account the interests of German carmakers by advocating an integrated approach, the weight-differentiated targets, and low penalties for non-compliance up to 2015 (Hey, 2010: 215-6, as discussed above).

Environmental NGOs saw the 'final deal, the result of months of negotiations and lobbying, as a poor compromise. In all areas of focused lobbying, some compromise was added to the text' (ten Brink, 2010: 198). T&E claimed that the provisions made in the legislation meant that the target for 2015 was in practice closer to 140 g CO_2/km than to the 130 g CO_2/km target (T&E, 2011c: 10). Nonetheless, the inclusion of the 95 g CO_2/km by 2020 target was seen as strengthening the environmental credentials of the legislation (ten Brink, 2010: 200). However, the Commission was expected to review the modalities of reaching this target, such as the slope and utility parameter, in 2013, thus 'opening the door for additional lobbying and negotiations' (ten Brink, 2010: 200). Furthermore, the publication of data on the progress of individual carmakers allowed for greater scrutiny of carmakers' efforts, and encouraged pro-environmental behaviour, while at the same time addressing the problem of free riding. Some lessons from the failure of the voluntary agreement were therefore undoubtedly learned, as will be discussed in Chapter 9.

ACEA's response to the legislation was shaped by the economic hardships of the industry in light of the 2008 financial crisis (as discussed in Chapter 2). In October 2008, ACEA called on the EU to support a loans package of €40 billion 'to help secure a sustainable market for current and newly-developed fuel efficient technologies', and a series of scrapping schemes to accelerate fleet renewal and stimulate consumer demand (ACEA, 2008c). Following Parliament's approval of the legislation, ACEA President and CEO of PSA Peugeot Citroën, Christian Streiff, said

> We are committed to do what we can to deliver, despite the sudden, dramatic economic downturn that severely limits our resources. We ask for governments to support the strategic auto sector in these extraordinary circumstances (ACEA, 2008d).

ACEA said the legislation allowed carmakers some flexibility to adjust production cycles to the regulatory requirements and to 'limit the financial risks caused by largely unpredictable factors including consumer preferences, market trends, economic developments and legal requirements in different fields' (ACEA, 2008d). However, it criticised the level of fines and said these were high in comparison to carbon prices in other sectors, and that in light of the economic downturn, they represented an

'additional burden on an industry already battling job losses and production cuts across the EU' (ACEA, 2009b: 16).

The adoption of the legislation on car CO_2 emissions needs to be understood in the wider context of the EU's climate change policy. As mentioned above, since 2007 the EU took measures to implement the climate change and energy package. In their review of the evolution of the EU's climate change policy, Jordan and Rayner (2010: 73) observed that these developments were framed in terms of 'climate change, energy security and, interestingly, also innovation'. The EU's climate change policy was thus perceived as preparing the EU for a green, post-industrial revolution (ibid.). This ethos was reflected in the text of the Regulation on car CO_2 emissions. The aim of the Regulation, it was stated

> [I]s to create incentives for the car industry to invest in new technologies. This regulation actively promotes eco-innovation and takes into account future technological developments […] in this way, the long-term competitiveness of the European industry is promoted and more high-quality jobs are created (European Parliament and Council of the European Union, 2009: point 13).

Thus, the legislation sought to promote synergies between economic competitiveness and environmental protection through the promotion of 'green' innovation. This theme will be developed in Chapter 8. The final section of this empirical analysis briefly examines carmakers' progress on reducing car CO_2 emissions since 2009.

Carmakers' Progress on Reducing CO_2 Emissions since 2009

Since the publication of the mandatory legislation in 2009, carmakers reduced their emissions drastically. Between 2008 and 2009, CO_2 emissions from new cars dropped by over 5% to an average of 145.7 g CO_2/km (CEC, 2010b: Article 2.2). This was the largest annual drop in average new car CO_2 emissions since the monitoring of carmakers' efforts began in 1999. The Commission acknowledged that some of these reductions were probably due to the financial crisis as well as scrappage schemes adopted by several Member States in order to promote consumer demand (ibid.). Wells (2010: 149) argued that scrappage schemes tend to stimulate the sales of 'low-value,

low-margin' car models that were also less polluting. A similar conclusion is reached by Kaul et al. (2012: 26) who found that the German scrappage scheme stimulated demand for smaller cars. However, while the trend towards the purchase of smaller cars resulted in a reduction in average CO_2 emissions of new cars, the environmental and economic benefits of these schemes are questionable (Wells, 2010: 149). Furthermore, a minor trend towards downsizing, whereby the mass, power and engine capacity of new cars slightly decreased in 2009, was noted. In 2010, average new car emissions dropped by a further 3.7% to 140 g CO_2/km (CEC Climate Action DG, 2011), the target originally envisioned in the voluntary agreement for 2008.

Several accounts suggested that carmakers were likely to exceed the mandatory targets. A report published by T&E in 2011 claimed that

> [A]ll available evidence points towards carmakers in Europe heading for very significant "over-compliance" with the CO_2 regulation and are hence likely to hit the 130 g CO_2/km target for 2015 several years in advance **(**T&E, 2011c: 3**).**

An analysis of official data on carmakers' progress in 2010, showed that 32 carmakers, accounting for 80% of new car registrations in the EU, already complied with the 2012 targets two years ahead of time, as illustrated in Figure 7.1 (ENDS Report, 444: 8-9). Manufacturers of smaller cars and notably Fiat and PSA took the lead, while some manufacturers of larger cars still faced difficulties in meeting the mandatory targets (T&E, 2011c: 3). In addition, T&E's report claimed that the real price of cars had fallen with the increased reductions in CO_2 emissions. T&E therefore claimed that not only were the CO_2 emissions reductions targets too lenient, but that compliance costs were also overestimated (ibid., p. 4). These figures undermined 'carmakers' protestations that mandatory CO_2 targets set by the European Commission in 2009 were excessively ambitious and costly' (ENDS Report, 444: 8-9). Or, as put by T&E Director, Jos Dings (quoted in ENDS Report, 444: 8-9), 'The EU needs to learn lessons from this. When it comes to future targets to improve fuel efficiency, industry cost estimates should be taken with an SUV-sized pinch of salt'.

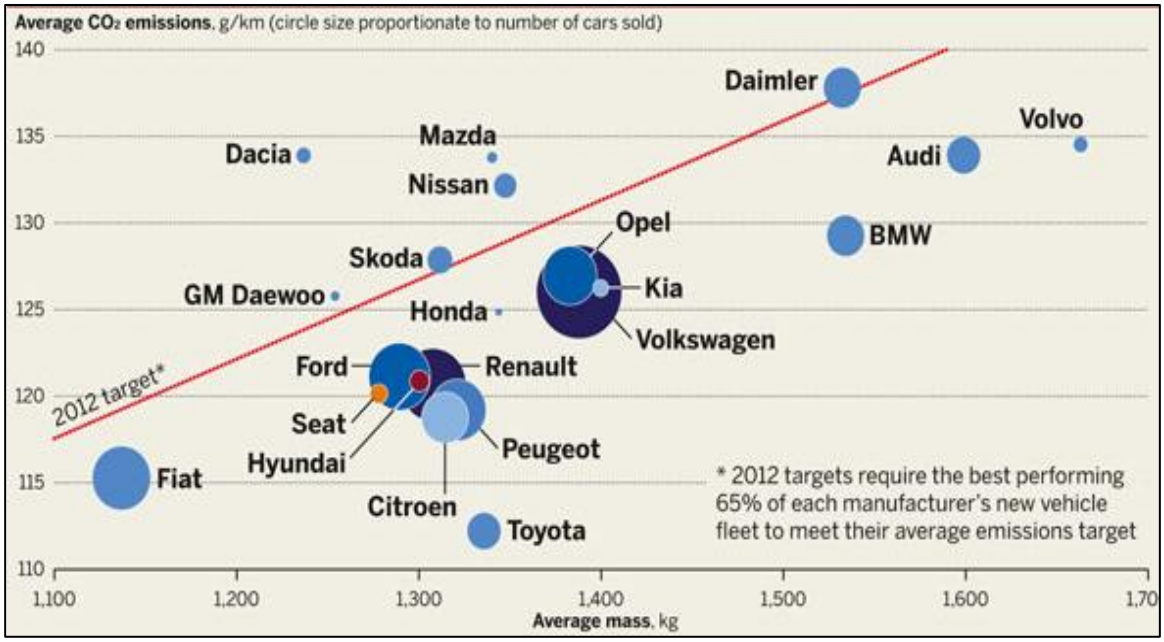

Figure 7.1: Average car CO_2 emissions by manufacturer (2010)

Source: ENDS Report (nr. 444: 8-9)

Despite progress on reducing average CO_2 emission of new cars, the EU's overall transport and car CO_2 emissions did not show signs of declining. CO_2 emissions from the transport sector rose by 27% from 1990 to 2011 (EEA, 2011a: 4). At the same time, demand for car use increased by 23% between 1995 and 2009 (EEA, 2011: 16). Thus, the EU still faced a great challenge in reducing CO_2 emissions from cars, and from the transport sector more broadly. The EU's strategy for addressing this problem was increasingly framed in terms of a 'new industrial approach based on clean and energy efficient vehicles [that] will boost the competitiveness of the European industry, provide new jobs in the automotive industry' and in other sectors of the economy (CEC, 2010a: Article 1). Thus, environmental protection was increasingly seen as a means of promoting economic growth. These trends will be discussed in more detail in Chapter 8.

Conclusions

This chapter provided a detailed account of the EU's efforts to reformulate the voluntary approach to reducing car CO_2 emissions and introduce mandatory legislation from late 2003. Through this account, the chapter illustrated some of the complexities and contestations inherent in EU car CO_2 governance, and particularly the political bargaining that shaped the reformulation of the voluntary agreement.

The chapter began by outlining the developments that led the EU to call for the introduction of mandatory legislation. Disillusion with the ACEA agreement, as well as carmakers' reluctance to accept a voluntary commitment to reduce emissions to 120 g CO_2/km by 2012 led to the emergence of these calls between 2003 and 2005. Following the coming into force of the Kyoto Protocol in 2005, pressure for action to reduce car CO_2 emissions increased. In response, carmakers advocated an integrated approach, which involved the participation of other stakeholders in efforts to reduce emissions through a combination of technical measures, the use of alternative fuels, and drivers' behaviour. The integrated approach was supported by the CARS 21 high level group, and formed the basis for the revised Community strategy to reduce car CO_2 emissions.

Throughout 2005 and 2006, the Commission investigated possibilities for reducing car CO_2 emissions. It launched an impact assessment and a working group on the integrated approach, as well as a public consultation. In February 2007, following the publication of an EU strategy to reduce CO_2 emission in 2020 and beyond, the Commission published a revised strategy on car CO_2 emissions. The strategy called for an objective of 120 g CO_2/km to be met through the integrated approach. Carmakers were expected to reduce average emissions of new cars to 130 g CO_2/km by 2012, while the integrated approach was expected to deliver the additional 10 g CO_2/km reductions.

Negotiations on mandatory legislation ensued. Throughout 2007, various policy actors mobilized their resources in order to influence the Commission's legislative proposal. Member States, the EU institutions, carmakers and environmental NGOs all promoted competing and often conflicting interests. The main points of contestation were the differentiation of targets, the deadline for implementation and fines for non-

compliance. Following intense lobbying from the above-mentioned actors, the Commission published the legislative proposal in December 2007.

The Commission's proposal was then subject to further lobbying efforts. In particular, German politicians and German carmakers that (on average) produced larger, more polluting cars objected to the proposal and took measure to ease the legislative burden. The outcome of these efforts was a weakened legislation, which allowed for a phase-in of targets that were differentiated according to car weight. Consequently, many carmakers complied with the 2012 CO_2 reduction targets ahead of time.

Overall, this chapter illustrated the contested nature of agreeing on legislation to reduce car CO_2 emissions. This process, which began in late 2003, lasted over five years. The agreement on mandatory legislation was shaped by compromises among economic actors, environmental interests, and political considerations. Further, the calls for action on climate change were increasingly associated with efforts to promote technological innovation and the economic competitiveness of the car industry. These trends pointed towards the EU's attempts to induce a 'green industrial revolution' in which the EU would gain a first-mover advantage. These developments illustrated the increasingly synergistic relations between economic growth and environmental protection. These findings are analysed from a neo-Gramscian political economy perspective in the following chapter.

Chapter 8

The Voluntary Agreement Dissected: A Neo-Gramscian Perspective

Introduction

The policy process of the ACEA agreement, as this thesis has so far illustrated, was characterised by contestation and compromise among competing economic, social, environmental and political interest groups. Chapters 5 to 7 demonstrated this empirically by examining in detail the choice, design, implementation and reformulation of the voluntary agreement. This chapter evaluates to what extent a neo-Gramscian approach can explain the interplay among these competing interests across multiple spatial scales in relation to these policy stages. It assesses the usefulness of the concepts of *hegemony*, the *historical bloc*, *passive revolution* and *war of position* in understanding EU car-CO_2 governance.

The chapter continues by briefly re-introducing the main theoretical concepts developed in Chapter 3. It then examines how a neo-Gramscian approach can be applied to understanding the policy cycle of the ACEA agreement. It does so by firstly discussing the policy choice and design stages of the ACEA agreement, and observing how these stages served to protect the hegemonic position of the car in the EU. It then examines how the implementation of the ACEA agreement reflected the balance of power among various policy actors in the historical bloc. Following this, the policy reformulation stage is analysed, with an emphasis on processes of contestation and compromise among various policy actors. Changes in the material, organisational and ideological practices within this historical bloc are outlined. The chapter then examines how the theoretical framework could be improved by incorporating insights from International and Comparative Political Economy approaches and institutional perspectives in order to devise a multi-level neo-Gramscian framework. The chapter concludes that the neo-Gramscian perspective employed in this thesis provided a good basis for understanding how EU car CO_2 governance was shaped through contestation and compromise among public and private policy actors across multiple spatial scales. This framework further promotes an understanding of the material, organisational and

ideological practices that ensured the continued hegemony of the car in European society.

A Neo-Gramscian Perspective: A Brief Reprise

Chapter 3 examined some existing theories of EU governance, namely multi-level and network governance approaches. These approaches acknowledge the multitude of public and private actors operating across the multiple spatial scales of EU governance. However, it was argued that these perspectives do not adequately explain the unequal distribution of power among these actors. The usefulness of political economy approaches was then evaluated. It was argued that although International Political Economy and comparative approaches emphasised the importance of economic interests, they remained rather state-centric, and did not pay sufficient attention to the role of private actors in shaping governance processes. For this reason, Chapter 3 identified a critical neo-Gramscian political economy perspective as a promising contender for explaining the governance of car CO_2 emissions in the EU, as seen through the policy cycle of the ACEA agreement.

To recall, the neo-Gramscian perspective adopted in Chapter 3 utilised the key concepts of hegemony, the historical bloc, war of position and passive revolution. Hegemony described the means by which an economic group became dominant by establishing its narrow economic interests as the universal interest of civil and political societies (Gramsci, 1971: 181-2). Where hegemony prevailed, a historical bloc was formed. A historical bloc is comprised of the dynamic alliances among social groups, and is constantly reshaped by dialectical processes of contestation and compromise. The bloc exercises hegemony through the utilisation of state authority, economic dominance and the 'consensual legitimacy of civil society', and through the alignment of material, organisational and discursive practices (Levy and Newell, 2005: 50). A hegemonic group maintains its influence by making compromises that do not threaten its dominance over counter-hegemonic groups. This strategy is perceived as a passive revolution. Counter-hegemonic groups can contest the dominant group's hegemony by employing a war of position, through which they aim to gain influence in political and civil society. The empirical challenge of a neo-Gramscian approach is therefore 'to

understand the dynamics of coercion, consent and resistance that constitute any hegemonic configuration' (Davies, 2011: 103).

Chapter 3 then applied a neo-Gramscian perspective to provide a preliminary analysis of EU car governance. It was argued that from a neo-Gramscian perspective the car enjoyed a hegemonic position in the EU. The hegemonic position of the car was evident in the convergence of economic, political and social practices that helped maintain the car's popularity. The car industry was an economic powerhouse in the EU, providing employment and tax revenues in many of the EU's Member States. It was also associated with technological innovation and economic growth more generally (Dennis and Urry, 2009). The car industry was a privileged political actor, with policymakers promoting its dominance through continued road-building, financial support and privileged access to policymaking (Paterson, 2007). Socially, the car was the preferred mode of private transport in the EU, with car use steadily increasing. Cars provided freedom of movement and shaped the identities of drivers. Thus, their hegemonic position was secured through economic, political and social practices. It was then argued that increasing awareness of the problem of climate change, and the significant contribution of cars to rising CO_2 emissions, threatened the hegemonic position of the car in European society. This thesis therefore set out to examine how EU car CO_2 governance was shaped through processes of contestation and compromise among various policy actors, and how material, organisational and ideological practices were re-aligned to accommodate the challenges of car CO_2 governance. In order to fulfil this objective, this chapter continues by discussing some of the main empirical findings of this thesis, and interpreting them from a neo-Gramscian perspective.

Policy Instrument Choice: Challenging the Hegemony of the Car?

As mentioned above, growing awareness of the problem of climate change in the early 1990s, posed a threat to the hegemony of the fossil-fuelled car. From the publication of the Consolidated Directive 91/441/EEC in 1991 (Council of the European Union, 1991), which called for the introduction of legislation on car CO_2 emissions by the end

of 1992, actors in the historical bloc governing the car came under increasing pressure to take action on the matter.

In immediate response, European carmakers offered in 1991 to voluntarily reduce their CO_2 emissions by 10% between 1995 and 2005. The advocacy of voluntary emissions reductions was emblematic of a wider 'corporate environmental management' approach that emerged in the 1990s, in which firms portrayed 'a fundamental harmony of economic and environmental interests by constructing products as "green" and depicting firms as responsible stewards of the environment' (Levy and Newell, 2005: 59). This approach represented

> [A] series of strategies and accommodations that help to shore up corporate legitimacy and autonomy and deflect the threat of more drastic regulation. It is thus *more about political and economic than environmental sustainability* (Levy and Newell, 2005: 59, emphasis added).

From a neo-Gramscian perspective, therefore, carmakers' advocacy of a voluntary agreement can be seen in terms of a passive revolution, aimed at maintaining dominance in the economic sphere, but also in political and civil society, as discussed in more detail below.

Carmakers' initial offer was rejected by policymakers for being unambitious. A process of political bargaining ensued. At the national level, each car-producing Member State supported policy instruments that favoured the competitiveness of its domestic car industry. For example, Germany supported differentiated emission reductions standards, according to car weight and size, while France supported an absolute target, complemented by fiscal incentives. The German proposal was designed to protect the economic competitiveness of German carmakers, which produced larger cars, while the French proposal advantaged the manufacturers of smaller cars, such as those produced in France. Member States also rejected proposals made by the "organic intellectuals" of the MVEG regarding fiscal measures - on grounds of subsidiarity and the need to promote national competitive advantage. Disagreement among Member States delayed the adoption of policy instruments to reduce car CO_2 emissions. These contestations illustrated the national political and economic importance of the car industry. As Paterson (2000: 256) notes, promoting the competitiveness of the car

industry 'helped to reproduce state power itself'. The structural power of the car industry in Member States can therefore be observed, although environmental protection increasingly became an important issue on national policy agendas.

Despite disagreement regarding the preferred policy instruments, policymakers agreed that reductions in car CO_2 emissions would be achieved mainly through supply-side improvements in car technologies. Technical innovations were expected to preserve the traditional attributes of the car - including safety, size, power, comfort and range - and hence ensure continued consumer demand (Levy and Rothenberg, 2002: 179). The possibility of reducing demand for car use, and thus curbing personal freedom of movement was, from the outset, deemed to be an unacceptable policy option. This framing of the solution to the problem of rising car CO_2 emissions in terms of supply-side technical measures illustrated not only the economic importance of the car in the EU, but also its social significance as an enabler of personal mobility (Dennis and Urry, 2009). Policymakers' reluctance to take measures to reduce car use and the promotion of technological measures to reduce CO_2 emissions pointed to the hegemonic position of the car in European society and to the need of policymakers to maintain their popularity by enabling personal mobility. These complexities illustrate the interconnectedness of political, social and economic factors in shaping EU car CO_2 governance.

Calls for action to reduce car CO_2 emissions intensified in 1995. Ahead of international climate talks in Berlin that year, Germany signed a voluntary agreement with German carmakers, who agreed to reduce the CO_2 emissions of new cars by 25% from 1995 levels in 2005. Germany then pushed for the adoption of an EU-wide voluntary agreement in order to protect the competitiveness of its carmakers (Levy and Egan 2003: 820). At that time, the advocacy and uptake of voluntary agreements was evident in a number of EU Member States, notably the Netherlands and Germany (EEA, 1997). Voluntary agreements were promoted as a means of improving compliance with environmental policy and reducing regulatory burden (OECD, 1999: 33). From a neo-Gramscian perspective, the support for voluntary business action was consistent with the rise of a neo-liberal, historical bloc 'founded on a manifesto of

privatization, unfettered international trade, the rollback of the welfare state, and industry self-regulation' (Levy and Egan 2003: 813). This bloc was guided by an ideological imperative of 'more market and less state at all levels of governance' (van Apeldoorn, 2001: 74), and thus secured the autonomy and power of economic interest groups.

Disagreement regarding the preferred policy instruments to reduce car CO_2 prevailed not only at the national level, but also at the EU level. Specifically, within the Commission, disputes arose between DG Environment and DG Industry. While DG Environment supported fiscal measures, DG Industry championed the voluntary approach. It can therefore be observed that while DG Industry was attuned with the interests of industry, DG Environment aimed to gain influence and promote environmental protection through the advocacy of fiscal measures. From a neo-Gramscian perspective, both national and EU political societies can therefore be seen as structures within which social actors operated, and as sites of both contestation and compromise among these actors (Bieler and Morton, 2001: 20).

The Community Strategy to reduce CO_2 emissions from cars was published in 1995 (CEC, 1995), with a goal of reducing the average CO_2 emissions of new cars sold in the EU to 120 g CO_2/km at a 'time horizon beyond 2005' (CEC, 1995: point 12). The strategy comprised three pillars: The main pillar of the strategy was a voluntary agreement with carmakers. It was supported by fiscal measures and a labelling scheme to influence consumer demand. From a neo-Gramscian perspective, the strategy can be seen as a compromise favouring both the economic interests of the car industry and the demand for personal freedom of movement over environmental protection. The voluntary approach allowed carmakers a great deal of flexibility in compliance (as illustrated later in this chapter). The remaining demand-side measures also comprised 'soft' instruments (NEPIs), and were designed to appease environmental demands - such as those made by DG Environment - while not fundamentally challenging the right for personal freedom of movement. From a neo-Gramscian viewpoint, therefore, the Community strategy to reduce CO_2 emissions from cars in general, and the voluntary agreement in particular, served to secure the continued hegemony of the car in

European society. The following section examines how the power relations among various policy actors shaped the design of the voluntary agreement.

The Design of the Voluntary Agreement: Alliance-Building in the Historical Bloc

The design of the voluntary agreement served to further strengthen the power of carmakers and the Commission vis-à-vis other policy actors. By adopting a voluntary approach, the Commission in effect bypassed the other EU institutions, as no provisions were made in the EU treaties for this policy instrument. In actual fact, the Commission ignored the opinion of the European Parliament, the only directly-elected EU institution, which was opposed to the voluntary approach. Despite Parliament's objections, the Commission initiated negotiations with ACEA in 1996. Negotiations were conducted between representatives from DG Industry and DG Environment and engineers from the car industry. They were closed to other policy actors including Member States, the EU institutions and Environmental NGOs. The negotiations unified DG Industry and Environment, and served to tighten the partnership between the Commission and the car industry.

A "symmetrical interdependent" relationship between the Commission and carmakers, whereby each of these actors needed 'each other in the realisation of their respective goals', can therefore be observed (Holman, 2004: 720). The Commission was able to rely on 'business advice' (van Apeldoorn, 2002: 49) and strengthen its power vis-à-vis Member States and the other EU institutions (Holman, 2004: 720). This trend can be perceived as part of a broader phenomenon of 'new constitutionalism', which

> [S]eeks to separate economic policies from broad political accountability in order to make governments more responsive to the disciplines of market forces and correspondingly less responsive to popular-democratic forces and processes (Gill, 2001: 47)

These observations are mirrored in the policy design stage of the ACEA agreement, which was characterised by closed negotiations between the Commission and carmakers. These negotiations served to protect the economic interests of the car industry at the expense of democratic legitimacy and accountability.

Despite the close dialogue between the Commission and ACEA, the voluntary agreement was concluded only in 1998. From the outset, the Commission said it would accept a target of 140 g CO_2/km to be achieved through technical measures, with the additional 20 g CO_2/km to be reduced through the remaining pillars of the Community strategy. The Commission was keen to adopt a voluntary agreement, which bridged inter-Commission differences. Further, it was concerned that failure to adopt a voluntary agreement would further delay EU action on reducing car CO_2 emissions. The Commission was therefore in a weak negotiating position against ACEA. ACEA was reluctant to accept the targets proposed by the Commission. It claimed that these targets were too ambitious and would endanger the economic competitiveness of the industry, and hence its viability for the European economy. In 1997, ACEA offered to voluntarily reduce its emissions to 167 g CO_2/km by 2005. This offer was rejected by the Commission and negotiations came to a standstill.

At the same time, several carmakers and oil companies engaged in a more confrontational strategy to influence international climate politics. Under the premises of the Global Climate Coalition, these companies employed material, organisational and discursive strategies to undermine international climate change governance. They invested resources, created 'astroturf' organisations, and discursively challenged the science of climate change in order to block international regulatory action on reducing CO_2 emissions (Levy and Egan, 2003: 815-816). Ahead of the Kyoto Conference of the Parties to the UNFCCC in December 1997, these groups lobbied heavily to appeal an international climate change agreement (ibid.). This strategy contradicted the consensual environmental stewardship image the car industry aspired to portray.

The uptake of the Kyoto Protocol marked a turning point in the negotiations of the ACEA agreement. From a neo-Gramscian perspective, climate change became an integral part of the historical bloc governing the car, and was enshrined across multiple spatial scales, ranging from international to national and local. Carmakers subsequently turned to a more accommodating passive revolution strategy. Consequently, negotiations on a voluntary agreement gathered momentum in early 1998. Environment Commissioner, Ritt Bjerregaard, and Industry Commissioner, Martin Bangemann, took

lead in negotiations for the Commission. The car industry was represented by ACEA President and CEO of BMW, Bernd Pischetsrieder. The Commission threatened to introduce mandatory legislation if an agreement was not reached. ACEA subsequently agreed to the 140 g CO_2/km target. Pischetsrieder was instrumental in securing the agreement. BMW had one of the highest average CO_2 emissions of all European carmakers. Therefore, it would have been more adversely affected by mandatory legislation than manufacturers of smaller, less polluting cars, who were not opposed to mandatory legislation. Thus, the economic interests of the car industry, and particularly the interests of the manufactures of larger cars, were instrumental in shaping the design of the voluntary agreement.

From a neo-Gramscian perspective, the ACEA agreement constituted a compromise that furthered the economic interests of the car industry, while accommodating growing pressure for action on climate change. Firstly, no sanctions were in place in case of non-compliance and the threat of mandatory legislation remained distant. Secondly, the agreement was signed between ACEA and the Commission, and did not commit individual manufacturers, thus free-riding remained a strong possibility. It was therefore up to the good will of individual carmakers to reduce CO_2 emissions. Thirdly, the 140 g CO_2/km target did not require the introduction of low-carbon technologies, but could be achieved entirely through incremental technological measures. Thus, it can be seen that the close partnership between the Commission and ACEA resulted in an unambitious agreement. These findings are similar to those of Wurzel (2002: 262), who noted that the close relations between the Commission and the car and oil industries, and the exclusion from negotiations of Member State and environmental NGOs representatives led to the proposal of unambitious standards under the Auto-Oil I programme.

On the ideological level, the choice and design of the voluntary agreement were guided by the principles of ecological modernisation. This approach emphasised the win-win possibilities of ensuring environmental protection while promoting economic growth. The ecological modernisation paradigm

> [P]uts its faith in the technological, organizational, and financial resources of the private sector, voluntary partnerships between government agencies and business, flexible market-based measures, and the application of environmental management techniques (Levy and Egan, 1998: 352).

The advocacy of the ecological modernisation discourse can be seen as emblematic of the wider neo-liberal historical bloc. As Newell (2008: 522) observed, 'the modalities, ideologies and forms which environmental governance assumes inevitably bear the characteristics of the neoliberal economy of which they are part' (Levy, 2008: 522). The ecological modernisation ideology which guided the choice and design of the voluntary agreement therefore served to reconcile tensions between the need for climate-change mitigation and the promotion of economic competitiveness (Paterson, 2007: 216). This compromise nonetheless ensured the continued hegemony of the car.

Levy and Egan (2003: 823) claim that these processes of contestation and compromise resulted in a 'reconstituted historical bloc' (Levy and Egan, 2003: 823). This bloc, they claimed, was

> [B]ased on new organizational forms advocating for industry action on climate change, the win-win discourse of ecological modernism […] and a reconsideration of economic interests on the part of industry accompanied by modest investments in low-emission technologies. The climate regime associated with this bloc provides very limited targets for emission reductions, market-based implementation mechanisms, and minimal regulatory intrusion upon corporate autonomy (Levy and Egan, 2003: 818).

The following section examines whether these assertions can be replicated through examining the implementation of the ACEA agreement. Moreover, the interactions among different actors in the historical bloc are outlined, and their effect on the implementation of the voluntary agreement assessed.

Implementing the ACEA Agreement: Passive Revolution or War of Position?

Following the signing of the ACEA agreement in 1998, policymakers, carmakers, and environmental NGOs all took action to ensure the implementation of the agreement. However, the voluntary targets were not met and mandatory legislation was subsequently introduced in 2009. This section continues by outlining the efforts made by various policy actors to ensure the implementation of the ACEA agreement, and

evaluates these from a neo-Gramscian perspective. It then examines in some detail how the interplay among conflicting social and economic demands shaped the implementation of the agreement.

Implementation Strategies of Various Policy Actors

Political society had a limited role in the implementation of the voluntary agreement. At the Member-State level, fiscal measures had an impact on the uptake of diesel-fuelled cars, and hence contributed to carmakers' implementation efforts (as discussed below). Over time, an increasing number of Member States also adopted fiscal instruments to promote the uptake of more fuel-efficient cars, although the uptake of these measures remained patchy. Therefore, the Commission considered that reductions in CO_2 emissions were mainly the result of technical efforts made by the car industry. The Commission, meanwhile, fostered its relations with the car industry through the publication of annual joint monitoring reports. However, the overall involvement of political society in the implementation of the ACEA agreement was limited, allowing for the involvement of other policy actors, and especially greater autonomy for the car industry.

Environmental NGOs stepped in to fill the gap left by regulators. While environmental NGOs had very little influence over the choice and design of the voluntary agreement, they became more active participants in the implementation stage. In particular, T&E became a 'watchdog' of carmakers' progress, and published numerous reports on the implementation of the agreement and carmakers' progress. T&E continuously raised concerns that carmakers would not meet the voluntary commitment, and that the EU's overall car CO_2 emissions steadily increased. In 2006, T&E became even more proactive, and published data on the progress of individual carmakers, which was not previously available to the public.

In neo-Gramscian terms, while environmental NGOs became more politically engaged, and hence increased their power in the historical bloc, it is doubtful whether their strategy can be seen as a successful war of position. Gramsci envisioned the war of position as a struggle on the 'cultural front of civil society' in an attempt to influence social practices (Morton, 2007: 97). While the UK anti-car movement in the 1990s

actively contested the hegemony of the car (Paterson, 2007: 182), other environmental NGOs employed more accommodating strategies. For example, the Greenpeace SMILE car campaign emphasised technological solutions to the problem of rising car CO_2 emissions, rather than framing the solution in terms of reducing car use. Instead of affecting public opinion through cultural, counter-hegemonic strategies to reduce demand for car use, environmental NGOs were more active in ensuring the implementation of the voluntary agreement through political efforts. Furthermore, environmental NGOs largely internalised the win-win ecological modernisation discourse, and increasingly highlighted the synergies among economic growth, environmental protection, oil security and consumer demand. Thus, it can be said that these counter-hegemonic actors were incorporated into the reconstituted historical bloc, and largely operated within the parameters set by the ecological modernisation ideology.

In attempts to reduce their CO_2 emissions, carmakers employed a series of material and organisational strategies to maintain their economic, social, and political dominance (see Levy and Egan, 2003; Levy and Newell, 2005). On the organisational level, carmakers formed alliances with other carmakers, oil refiners, alternative technology companies, Member States and the EU institutions in order to develop low carbon technologies. On the material level, carmakers invested in low carbon technologies. However, in order to meet the requirements of the voluntary agreement, carmakers invested mostly in incremental technological developments. These efforts can be seen as 'defensive economic strategies', which served to 'strengthen the economic power of the car industry, reduce burden of investment in low carbon technologies and provide opportunities for economies of scale' (Levy and Egan, 2003: 817). Through the uptake of incremental technologies, and notably a shift towards diesel-fuelled cars, ACEA exceeded the interim targets set for 2003. However, progress subsequently slowed, and it became evident that manufacturers were not on track to meeting the voluntary targets. The remainder of this section examines some of the factors that influenced the implementation of the ACEA agreement.

Conflicting Trends in the Implementation of the Voluntary Agreement

ACEA's progress on reducing the CO_2 emissions of new cars was influenced by conflicting trends in supply and demand. On the one hand, over the implementation period of the agreement, the market share of smaller and less polluting cars increased (as discussed in Chapter 6). In particular, demand for more fuel-efficient cars was influenced by rising oil prices and wider economic crises in 2000-2001, and from 2007 onwards. Despite the environmental benefits of higher fuel prices, this was not considered to be a politically-viable policy option. The widespread fuel protests across the EU in 2000 exposed the dependence of European society on fossil-fuelled transport, and the political unacceptability of raising fuel prices as a means of reducing CO_2 emissions. Several Member State governments, including the UK, acted to ease the burden of fuel taxation in order to appease motorists' demands. Subsequently, the cost of fuel in real terms decreased, and average taxes on road fuels in the EU-15 were €0.10 lower in real terms in 2011 than in 1999 (T&E, 2011b: 4). This reduction was primarily the result of the shift to lower-taxed diesel-fuelled cars (as discussed in Chapter 6), and the fact that fuel taxes in most Member States were not automatically adapted to inflation (ibid.). The 2000 oil crisis also raised tensions between EU Member States and the OPEC, and highlighted the EU's dependence on oil imports from geo-politically unstable regions.

From a neo-Gramscian perspective, these events illustrated the continued hegemony of the fossil-fuelled car and the dependency of European society on oil in order to fuel mobility. The complexities inherent in EU car CO_2 governance and the challenges political society faced in reconciling the societal, environmental, and economic interests that shaped the policy process of the ACEA can therefore be better understood. Further, these events highlighted the increasingly contested nature of car hegemony not only due to environmental considerations, but also due to geopolitical instability and increasing oil insecurity.

On the other hand, ACEA's implementation efforts were impeded by a trend towards heavier, more powerful cars. Over the implementation of the agreement, the mass, engine power and capacity of new cars sold in the EU increased. Carmakers

blamed regulatory requirements and consumer demand for comfort and safety for this trend. However, these claims were contested by policymakers, environmental NGOs, consumer groups, and road safety organisations alike. These actors claimed that the upsizing trend was due to added features to make cars more attractive to consumers, and hence stimulate demand. This trend was noted across all market segments, but was particularly evident in the growing market share of SUVs and luxury cars. Paradoxically, while carmakers made efforts to reduce the CO_2 emissions of new cars, they simultaneously promoted the uptake of larger, more polluting but also more profitable cars. Thus, conflicting economic and environmental interests, as well as considerations of consumer demand, shaped the implementation of the ACEA agreement.

These findings strengthen the assertion that ACEA's strategy to reduce CO_2 emissions from cars can be seen in terms of a neo-Gramscian passive revolution. Whilst carmakers made some incremental efforts to reduce their CO_2 emissions, their primary objective remained the protection of their economic competitiveness. This was achieved by making cars more attractive to consumers, and stimulating demand for faster, more powerful, larger, safer, more comfortable, and crucially, more profitable cars. The objective of ensuring continued consumer demand was in itself contradictory to the quest to reduce car CO_2 emissions, as stimulating demand for car use would inevitably lead to an increase in CO_2 emissions (known as the rebound effect). Moreover, the contradiction between economic growth and environmental protection was apparent in the upsizing trend discussed above. Carmakers aimed to achieve two contradictory objectives. It was nonetheless evident that the quest to ensure economic competitiveness outweighed carmakers' efforts to reduce CO_2 emissions, as discerned through the upsizing trend and the eventual failure of the voluntary agreement.

From the above, it can be seen that the interconnectedness of supply and demand shaped the outcomes of the ACEA agreement. To recall from Chapter 3, the quest for personal freedom of movement and considerations of safety and comfort favoured the car over other modes of transport, and rendered car use as 'a way of life, an entire culture' (Dennis and Urry, 2009: 40). As Paterson (2007: 165) noted, the increasing

demand for mobility and the creation of 'the automobile subject' (i.e. car user), 'is something which has been produced through a complex interplay of popular cultural forms, daily practices, regulatory interventions, surveillance and resistance' (Paterson, 2007: 165). Crucially, the mobilisation of demand is necessary in order to accelerate consumption (Paterson, 2007: 162), and hence secure the continued hegemony of the car. Since consumer demand is a prerequisite for the continued economic growth of the car industry, it is in many ways a manufactured demand. Evidently, over the implementation of the ACEA agreement demand for cars grew, not only in terms of car size and power, but also through the overall increase in car ownership and distance travelled. In effect, the limited reductions in car CO_2 emissions were offset by increasing car use. From a neo-Gramscian view, this ever-increasing demand for car-use, personal freedom of movement and comfort are evidence of the deeply rooted hegemony of the car in European society.

In summary, the complexities of and contradictions in the historical bloc governing car CO_2 emissions were evident in the implementation of the ACEA agreement. In particular, the incompatibility of reducing car CO_2 emissions with securing the continued economic growth of the car industry was evident. These contradictions manifested in the ever-increasing demand for car use in general and the 'upsizing' trend of the car fleet in particular. The neo-Gramscian analysis presented above suggests that in order to maintain their economic dominance, carmakers had to ensure continued consumer demand for their products. This objective was pursued by making cars more attractive to consumers and more profitable for manufacturers, but also more polluting. Thus, efforts to stimulate consumer demand contradicted measures to reduce car CO_2 emissions. Civil society was thus confirmed as a site of securing the hegemony of the car. As Nieuwenhuis (2007: 28) observes: 'Ultimately we need to recognise that most motorists – aided and abetted by the car industry – are currently engaged in car abuse – an affliction not unlike drug abuse'. Overall, therefore this section concluded that carmakers' strategy to reduce CO_2 emissions from cars can be seen in terms of a successful neo-Gramscian passive revolution. At the same time, the strategy employed by environmental NGOs cannot be seen as a successful war of position. Rather, this section argued that the contradictory interests of environmental

NGOs were successfully integrated into the historical bloc governing the car. The hegemonic position of the car in the EU was therefore maintained, while making some minor accommodations to environmental concerns. However, from the mid-2000s, with growing international action on climate change, car hegemony became even more contested, as seen in the policy reformulation stage of the ACEA agreement discussed below.

Policy Reformulation: Towards a Reconstituted Historical Bloc?

From late 2003, calls for the introduction of mandatory legislation emerged. Germany was the first Member State to make these demands in December 2003. These calls were made in light of ACEA's reluctance to commit to a voluntary 120 g CO_2/km by 2012 target. Instead, ACEA said it could at best achieve a target of 133 g CO_2/km in this time frame. The Environment Council, the European Parliament, and environmental NGOs all called for the introduction of mandatory legislation. These calls intensified following the agreement on the Kyoto Protocol in 2005, and in light of the growing discontent with carmakers' progress on reducing CO_2 emissions under the voluntary agreement.

In response to these demands, ACEA called for an 'integrated approach' to reducing car CO_2 emissions. This approach entailed reductions in CO_2 emissions through technical and complementary measures involving all stakeholders, including oil companies, drivers and regulators. By promoting the integrated approach, carmakers accepted some responsibility for reducing CO_2 emissions, but shifted some of the burden of compliance to other policy actors. From a neo-Gramscian perspective, carmakers' advocacy of the integrated approach can be seen as a means of accommodating demands for environmental protection with the need to promote economic competitiveness. Furthermore, the integrated approach illustrated the complexities inherent in EU car CO_2 governance, and the (contested) hegemonic position of the car in the EU. Thus, in order to govern car CO_2 emissions, efforts were needed from various economic, political and societal actors.

The integrated approach soon became the guiding principle of the EU's renewed strategy to reduce CO_2 emissions from cars. In January 2005, Industry Commissioner Günter Verheugen launched the CARS 21 high-level group. The group was instigated in light of the economic difficulties the car industry faced due to slow economic growth in the EU, and the mounting regulatory burden affecting its operations. Its aim was to provide policy recommendations to promote the global competitiveness of the European car industry. The high-level group embraced the integrated approach to reducing car CO_2 emissions. In parallel, the Commission launched a working group on the integrated approach under the EU climate change programme, an impact assessment and a public consultation on the matter. These participatory processes were then used to inform the revised Community strategy to reduce car CO_2 emissions.

In comparison with the process of agreeing on the voluntary agreement, there is no doubt that the EU adopted a more participatory approach in the reformulation of the agreement. However, these participatory practices need to be analysed with some caution. Holman (2004: 723) suggested that the promotion of participation of private and public actors in policymaking can be understood through the concepts of 'new populism'. New populism

> [I]s a political style that presents emerging structures of new constitutionalism and public-private partnerships as serving the general interest. The general interest in then defined in terms of improving competitiveness in a global setting (Holman, 2004: 723).

Thus, while the reformulation of the ACEA agreement ensured the consultation of a range of policy actors, it was to a large extent structured by the need to promote the economic competitiveness of the European car industry.

In February 2007, the Commission proposed a revised Community strategy to reduce CO_2 emissions from cars. The proposal was shaped by conflicting economic and environmental demands. These conflicts were particularly evident in inter-Commission disputes between DGs Industry and Environment. While Environment Commissioner Stavros Dimas supported mandatory legislation to ensure that carmakers reduce their emissions to 120 g CO_2/km by 2012, Industry Commissioner Günter Verheugen supported softer instruments, such as an emissions trading scheme. The revised

Community strategy aimed to reconcile these competing interests. On the one hand, the strategy called for mandatory legislation, as advocated by the Environment Council, DG Environment, the European Parliament and environmental NGOs. On the other hand, it endorsed the integrated approach, and relaxed targets to 130 g CO_2/km by 2012, as proposed by carmakers in 2003. Thus, the strategy was a compromise between the economic interests of the car industry and growing pressure for action on environmental protection and climate-change mitigation.

The strategy was subject to intense political bargaining. Once it became clear that mandatory targets were inevitable, carmakers shifted their lobbying efforts to weaken these. For example, carmakers supported a mass-based utility curve to determine the necessary reductions in CO_2 emissions. This parameter would allow higher emissions for the manufacturers of larger cars, and notably German carmakers. Environmental NGOs and the European Parliament criticised this choice of utility parameter. They argued that it would eliminate incentives to reduce emissions through making lighter cars, and could result in perverse incentives for carmakers to increase the weight of new cars. Carmakers also lobbied to postpone the implementation deadline to 2015. They were partially supported by the European Parliament, which called for a target of 125 g CO_2/km by 2015. Throughout the reformulation of the agreement, ACEA repeatedly warned that overly-ambitious CO_2 reduction targets would result in an economic downfall not only for the car industry, but also for the wider EU economy, thus highlighting the car industry's structural power. Carmakers were further supported by Member States, especially Germany and France, which employed aggressive lobbying tactics to protect the competitiveness of their domestic car industries. The structural dependencies between Member States and the car industry can therefore be observed.

In December 2007, the Commission published a proposal for mandatory legislation (CEC, 2007f). The proposal called for a 130 g CO_2/km target as average for new cars sold in the EU in 2012, as part of an integrated approach to achieve the 120 g CO_2/km objective. The proposal was then subject to intense political bargaining. In particular, Germany and German carmakers flexed their lobbying muscles in order to

water down the proposal. Tension became evident between Germany and France. Germany accused France of supporting legislation that promoted the competitiveness of French carmakers, while disadvantaging German carmakers. A compromise was reached between the two Member States ahead of the French EU Presidency in the second half of 2008. The compromise allowed for the phasing-in of legislation up to 2015, the inclusion of eco-innovations in reduction efforts, and a softening of the level of fines. This compromise was accepted in the European Parliament in December 2008, and legislation was officially adopted in April 2009.

While the legislation marked the end of the voluntary approach, it can hardly be seen as a victory of environmental over economic interests. The 120 g CO_2/km target originally envisioned for 2005 was, once more, postponed and would not be implemented through technical measures even by 2015. The legislation allowed some flexibility in implementation for the manufacturers of larger cars, and especially German carmakers. The political power of Germany and German carmakers was thus evident in the reformulation of the voluntary agreement. Christian Hey (2010) noted the paradoxical role of Germany in shaping the EU's legislation on car CO_2 emissions. On the one hand, Germany was an important driver of measures to reduce car CO_2 emissions and a climate-leader more generally. On the other hand, Germany impeded the uptake of more ambitious targets to reduce car CO_2 emissions. Hey noted that the close ties between German politicians and carmakers served to protect the car industry against 'regulation-driven' innovation (2010: 225). From a neo-Gramscian perspective, it can be seen that the hegemony of the car was so deeply rooted in Germany that economic, political and social actors converged to deflect ambitious environmental standards, in favour of legislation that protected the dominance of the car. Thus, although Germany was perceived as a climate change leader, it became a 'green car laggard' (Hey, 2010: 211).

Conversely, over the policy reformulation stage, environmental protection was increasingly perceived as a prerequisite for the stimulation of economic growth in the car industry. For example, in 2007, ahead of international climate talks in Bali, ACEA called for an international climate change agreement, which it said could help secure its

environmental and economic competitiveness and create a global level playing-field. In 2008, in light of the economic crisis of the world economy and carmakers in particular, ACEA asked the EU for financial aid to ensure the uptake of low-carbon technologies through supply and demand-side incentives. The convergence of economic and environmental interests was observed in the text of the legislation to reduce car CO_2 emissions. The legislation stated as its aim the promotion of innovation in order to ensure the long-term competitiveness of the European car industry and the creation of jobs in the EU (European Parliament and Council of the European Union, 2009: p. 2). Thus, environmental innovation was increasingly seen as a prerequisite for promoting economic growth. From a neo-Gramscian perspective, it can be seen that changes occurred in the historical bloc governing the car, as discussed below.

Putting the Pieces together: The Hegemony of the Car Revisited

The above analysis was mainly concerned with examining the influence of various policy actors on the governance of EU car CO_2 emissions. However, in order to understand how the relations between 'dominant class fractions, political elites and more-or-less successfully mobilised civil society activists' (Davies, 2011: 103) are coordinated, there is a need to explore the second dimension of the historical bloc: the material, organisational and discursive practices that stabilise and reproduce relations of power, and served to secure a hegemonic order (Levy and Newell 2005: 50). These are discussed below.

On the material level, the late 1990s and 2000s saw growing investment in low-carbon car technologies. These included advanced hydrogen fuel-cell, electric and hybrid technologies, as well as incremental technologies, such as direct-injection diesel and petrol engines (as discussed in Chapter 6). These developments need to be understood in the wider economic context. The 2000s saw the creation of carbon markets, including the European Emissions Trading Scheme, in attempts to commodify CO_2 emissions (see e.g. Giddens, 2009 Chapter 8 for discussion on this). These efforts resulted in the emergence of 'an embryonic form of climate capitalism' (Newell and

Paterson, 2010: 8), in which climate change mitigation is addressed through market solutions and is perceived as a business opportunity rather than a threat. Thus, attempts at 'greening the car'

> [N]eed to be articulated as an element in an overall accumulation strategy, which will enable [...] a transformation of the structural power of car firms to become an ally rather than an obstacle in the greening process (Paterson, 2007: 209).

Therefore, from a neo-Gramscian perspective, investment in low carbon technologies can be seen as a material strategy to ensure the continued economic dominance of the car industry in light of increasing demands for action on climate change.

On the organisational level, partnerships became increasingly prevalent during the policy process of the ACEA agreement. For example, in the promotion of low carbon technologies, partnerships were formed among carmakers, oil companies, alternative energy providers, and political actors on various spatial scales. Even environmental NGOs invested in low-carbon car technologies, notably the Greenpeace SMILE car, in order to illustrate the potential for CO_2 emission reductions. Further, the EU institutions - and particularly the Commission and the Environment Council - supported partnership and 'shared responsibility' with private actors in order to address climate change. While the car industry grudgingly accepted its role as a partner and 'environmental steward', environmental NGOs also emerged as proactive policy actors, especially in the regulatory vacuum that was left in monitoring the implementation of the voluntary agreement. Newell and Paterson (2010: 29) observe that these climate-partnerships are emblematic of neo-liberalism more generally, and can be 'understood as the result of efforts by private companies to avoid [...] regulation' (ibid., p. 31). This statement holds true in the case of the ACEA agreement, where partnership between the car industry and the Commission delayed the adoption of mandatory targets by over a decade. This form of organisation, or 'network governance', can be understood as an attempt at 'cultivating the disposition' of policy (or network) actors in order to incorporate their interests into the hegemonic project (Davies, 2011: 5). From a neo-Gramscian view, it can be seen that material and organisational practices served to incorporate environmental concerns into the hegemonic project through the creation of

partnerships and the promotion of market-based solutions to reducing car-CO_2 emissions.

These synergies were further secured through ideological and discursive practices. As discussed above, from the 1990s, the prevailing discourse guiding car CO_2 governance was that of ecological modernisation, which served to overcome contradictions between the environmental impacts of continued growth in car use and the need to promote the competitiveness of the car industry (Paterson, 2007: 216). A neo-Gramscian analysis suggests that the ecological modernisation discourse served to protect the hegemony of the car, through the incorporation of the rival environmental discourse into the dominant neo-liberal ideology. In this view, hegemony can be seen as the

> [O]utcome of an articulation of rival ideologies (or ideological elements) into a unifying discourse. This necessarily implies that the original ideological project that sought to establish its own hegemony is transformed in the process through which it achieves its goal. A hegemonic ideology necessarily always transcends any particular class or group-bound view, not only by representing the narrow interests of the dominant class as the general interest but by genuinely incorporating opposing interests into its discourse, although in such a manner that they are subordinated to the interests specified by the original class ideology of the hegemonic group (van Apeldoorn, 2002: 20).

The ecological modernisation discourse therefore accommodated environmental concerns, while ensuring the continued hegemony of the car.

Through the convergence of material, organisational and discursive practices, a reconstituted historical bloc emerged. This bloc was guided by a 'greening the car' discourse, which takes for granted the dominance of the car, 'attempting simply to change the ways in which cars are made and used to reduce their environmental impacts' (Paterson, 2007: 192). In the emerging bloc, environmental protection is increasingly seen as a *prerequisite* for the continued economic growth of the car. Further, there is a growing recognition that 'soft' policy instruments are not sufficient for promoting these synergies. Instead, the emerging policy instruments, as seen in the EU's legislation on car CO_2 emissions, are of a more flexible, 'responsive' nature (Ayres and Braithwaite, 1992). They provide quantifiable targets, and allow for some flexibility in implementation, while ensuring a level environmental and economic

playing field. These practices of the reconstituted bloc, nonetheless served to reproduce the hegemonic position of the car in the EU.

The question therefore remains as to whether the car industry 'can change, or is in fact a hindrance to change' (Wells, 2010: 169). This question, Wells claims, 'is a vital issue of concern for the achievement of sustainable automobility into the future'. The increasing need to reconcile environmental protection and economic growth in the car industry, he professes, is a question that will 'never be simply resolved'. Instead,

> [T]he expectation is for a discourse to unfold, contested and uneven, with multiple false dawns, mistakes, policy errors, failed technologies and thwarted expectations as we stumble more or less cohesively into our future (Wells, 2010: 169).

The contradictions inherent in the continued hegemony of the car, albeit accommodated through material, organisational and discursive practices, cannot be easily resolved. However, the greatest challenge in achieving the 'greening of the car' lies in affecting behavioural change. As Wells (2010: 170) notes:

> In the end, the era of eco-austerity must encompass entirely different cultures of automobility in which the values and norms associated with mobility are radically different from those in place today. If the transition to sustainability is going to be difficult for vehicle manufacturers, it is going to be even more difficult for us.

Or, as put by Paterson (2007: 223), the real challenge in breaking the hegemony of the car lies in transforming the 'automobile subject', and changing drivers' behaviour, norms, and 'ultimately their sense of *who they are* in the world' (Paterson, 2007: 223, emphasis in original). This task will require concerted efforts on many fronts, and courage in addressing questions of personal freedom of movement.

So far, this chapter provided an in-depth neo-Gramscian analysis of the policy process of the ACEA agreement. It was illustrated that this perspective can fruitfully explain some of the complexities and contradictions inherent in car CO_2 governance, and specifically how economic and environmental demands were mediated through material, organisational and discursive practices. The following section examines how this framework could potentially be improved by incorporating insights from other theoretical perspectives.

Drawbacks of the Neo-Gramscian Approach and Suggestions for Improvement

The neo-Gramscian analysis presented above offers some important insights into how the policy process of the ACEA agreement was shaped by the power relations among different policy actors, and how these relations were framed through material, organisational and ideological practices. However, as with any theory, this perspective does not explain all aspects of this governance process. Three possible criticisms and suggestions for improving the theoretical analysis are examined below.

Firstly, this thesis could have benefited from better incorporating the insights of neo-Gramscian international political economy accounts. A significant proportion of neo-Gramscian accounts are derived from the neo-Gramscian international political economy approach developed by Cox (1981, 1987, 1993). These approaches examine the transnational power of capital and the internationalization of the state in the context of the global political economy (see e.g. Sklair, 2001). Most of the neo-Gramscian contributions to the literature on EU integration (inter alia Bieler and Morton, 2001; Cafruny and Ryner, 2003; van Apeldoorn, 2002) are derived from this tradition. These perspectives hold that European integration has to be 'analysed against the background of globalisation, and the transnational restructuring of social forces since the early 1970s' (Bieler and Morton, 2001: 4). Similarly, neo-Gramscian IPE approaches to environmental governance have examined the 'role of business in international environmental governance' (Newell and Levy, 2005: 340).

An international political economy account of EU car CO_2 governance would analyse the choice, design, implementation and reformulation of the ACEA agreement in the context of the rising global power of the car industry and the internationalisation of the state and civil society. Incorporating these insights would allow us to view this policy process as a means of promoting the global competitiveness of the car industry in an increasingly globalised political and civil society. Thus, it would most likely include an analysis of the voluntary agreements with Japanese and Korean manufacturers. Moreover, an IPE-inspired account might be able to better theorise the impacts of international climate change politics on the policy process of the ACEA agreement. Another element of analysis that an IPE neo-Gramscian account might highlight is the

relative power of some Member States in the transnational historical bloc. For example, it can be argued that the historical bloc was shaped by the political power of Germany, which significantly influenced the policy process of the voluntary agreement. These insights are important, and although not made explicit, they are to a certain extent incorporated into the theoretical analysis of this thesis.

However, the ability of IPE-inspired neo-Gramscian accounts to explain social relations has been questioned (Germain and Kenny, 1998). For this reason, and in order to ensure a 'systemic analytical point of departure' (Newell and Levy, 2005: 343), the focus of this thesis remained on the EU-level. Treating the EU as a sui-generis political system (Hix, 1998), or a 'polity in its own right' (Cafruny and Ryner, 2003a: 3), allowed for the examination of 'conflict and coordination across networks and alliances, rather than the more familiar levels of analysis that are said to separate domestic from international political arenas' (Newell and Levy, 2005: 343). Notwithstanding, the analysis of this thesis distinguished to some extent between national, EU and international political scales.

This leads us to the second suggestion for improvement, which relates to a comparative account of national interests. Adding a comparative element to the analysis would allow for examining the varieties of capitalism in Member States, and how these shaped the policy process of the ACEA agreement. For example, Mikler (2009) employed a comparative 'varieties of capitalism' approach to examine strategies of carmakers in Germany, the U.S and Japan to reduce their CO_2 emissions. His approach distinguished between liberal and coordinated market economies and the strategies of carmakers in these economies. A similar approach could be applied to the analysis of the ACEA agreement. This would allow for a better distinction and comparison of the strategies of regulators and carmakers in different Member States. For instance, the close relations between Germany and German carmakers could be explained by viewing Germany as a coordinated market economy in which 'the state's role is one of support for industry, working with firms and industry associations to further national objectives, and helping and coordinating firm's activities' (Mikler, 2009: 34). The strategies of firms and regulators in Germany could then be compared and contrasted with the liberal

market economy of the UK and the mixed market economies of France and Italy (Schmidt, 2008: 313).

This perspective would allow for insights into differences that run along national lines, and promote a comparison of the strategies of various carmakers and Member States. It could further help assess whether one EU Member State enjoyed a hegemonic position over others, as suggested above. Despite these possible advantages, the varieties-of-capitalism approach has been criticised for downplaying the role of political and civil society, while over-emphasising the role of industry (Schmidt, 2008: 311). Although it might allow for a better understanding of differences in firms' strategies that run along national lines, it could hamper the intricate analysis of the neo-Gramscian framework above. Thus, it might not adequately account for the complex relations of contestation and compromise among various policy actors, and how these are mediated through material, organisational and discursive practices. These aspects would need to be better examined through future research.

Thirdly, insights from institutional theories have the potential to enrich the theoretical analysis of this thesis. Institutional theories of the EU have examined the power of the EU institutions and Member States in shaping EU governance processes (see e.g. Pollack 2009 for review). In contrast, critical approaches, including the neo-Gramscian perspective of this thesis, conceptualise institutions as 'either absent or epiphenomenal, i.e. reflections of deeper factors or processes such as capitalism or the distribution of political power' (Pollack, 2009: 125). The findings of this thesis suggest that political society is a site of bargaining among different social forces, and therefore reflects the balance of powers among these actors. However, through the incorporation of institutional analysis, this thesis could derive a more nuanced account of the policy process of the ACEA agreement. For example, an institutional perspective could perhaps help explain why the Commission was so powerful in the design of the voluntary agreement and why some DGs were more influential than others in the policy process of the agreement. Further, it could explain how over time the European Parliament transformed from a relatively passive policy actor to a more proactive regulator, in correlation with its growing decision-making powers. An institutional

perspective could also shed light on the role of different parties within the Parliament and in Member States in shaping the policy process, a topic that was not addressed in this thesis. It could also help explain the relative power of Member States in the Council of Ministers, and the coalitions between them.

Nevertheless, institutional perspectives on their own do not adequately explain the nature and distribution of power in the EU (van Apeldoorn et al., 2003: 17). However, when combined with a neo-Gramscian perspective, they could offer a more parsimonious explanation of EU governance. This corresponds to Levy and Newell's (2005) suggestion to incorporate insights from organisational and management theory into a neo-Gramscian framework for understanding business approaches to environmental policy. This framework allowed for 'intellectual coherence and a more critical understanding' of institutional theory (ibid., p. 63). A neo-Gramscian approach could contribute to institutional theories by explaining how the EU institutions and ideas have 'during the last decade promoted a neo-liberal agenda' (Cafruny and Ryner, 2003a: 4). A neo-Gramscian institutional analysis would therefore critically examine the role of the EU and Member State institutions in shaping EU car governance, while holding the assumptions that they are structurally compelled to ensure the continued power of capital.

In summary, the neo-Gramscian framework of this thesis could be expanded towards a multi-level neo-Gramscian perspective. As Joerges and Everson (2005: 159) note:

> Europe's struggles and tussles […] not only mirror the old, if obscured, conflicts carried on behind the edifice of the traditional national constitutional settlement, but are also increasingly being set in a far wider, globalised, context.

Therefore, a more parsimonious neo-Gramscian approach would possibly combine three explicit levels of analysis. On the national level, it would examine the occurrence and strength of historical blocs and how these are shaped and reshaped through contestation and compromise between hegemonic and counter-hegemonic groups, whilst comparing national variations. At the EU level, it would better incorporate insights from institutional theories to explain the relative power of EU and Member State institutions

in shaping the historical bloc governing the car. The analysis could then be broadened to assimilate insights from neo-Gramscian international political economy accounts regarding processes of globalization and neo-liberalisation, in order to better understand developments in the historical bloc governing the car. However, as Piattoni (2009: 176) notes, constructing a multi-level framework is a 'maddening task' that could result in loss of theoretical clarity in a trade-off for empirical richness. Nonetheless, the neo-Gramscian concepts of hegemony, historical bloc, passive revolution and war of position provide useful tools for examining social relations across multiple spatial scales. The possible contribution of a neo-Gramscian approach to the literature on voluntary agreements, NEPIs and policy instruments more broadly is examined in Chapter 9.

Conclusions

This chapter examined the usefulness of a neo-Gramscian political economy perspective in explaining EU car CO_2 governance, as seen through the policy process of the ACEA agreement. To this end, the chapter applied the concepts of hegemony, the historical bloc, passive revolution and war of position.

The theoretical analysis began with the observation that the car historically enjoyed a hegemonic position in the EU. The car's prevalence was enabled through its economic dominance, the dependency of European society on car use, and the close relations between the car industry and policymakers. However, the hegemonic position of the car, it was argued, was threatened by increasing concerns with climate change. The chapter then proceeded to examine how the complex and contested interactions among public and private policy actors shaped the EU's attempts to reduce car CO_2 emissions, and how these contested relations of power could be observed through examining the policy process of the ACEA agreement.

It was argued that the choice of the voluntary agreement served to protect the hegemony of the car. The advocacy of voluntary business action was emblematic of a neo-liberal ideology which called for 'more market and less state' and therefore served

to promote the power of economic actors. Furthermore, voluntary agreements were also encouraged under the ecological modernisation discourse, which aimed to reconcile conflicting economic and environmental demands. Carmakers also supported voluntary environmental agreements. These were seen as a means of accommodating environmental demands, while deflecting more challenging regulations. Thus, the choice of a voluntary agreement was conceptualised in terms of a neo-Gramscian passive revolution that made some concessions to environmental demands, while protecting the dominance of the car industry.

The design of the voluntary agreement revealed a close relationship between carmakers and the Commission. The negotiations of the agreement were closed to other policy actors, and therefore largely served to protect the economic interests of the car industry. Carmakers still contested the voluntary approach. A compromise was only reached in 1998, following the agreement on the Kyoto Protocol. Faced with an international climate-change agreement, carmakers had to adopt a more accommodating approach in order to improve their environmental credentials. These developments led to what Levy and Egan (2003: 823) called a 'reconstituted historical bloc'.

The implementation of the voluntary agreement shed light on the complexities and interdependencies inherent in the historical bloc governing car CO_2 emissions. Throughout the implementation of the agreement, the involvement of public policy actors was limited. At the same time, environmental NGOs stepped in to safeguard the implementation of the agreement. However, the implementation of the agreement largely depended on the efforts of carmakers. The strategies of carmakers included creating partnerships with other stakeholders, investment in low carbon technologies, but predominantly the introduction of incremental technological measures. While carmakers did initially take steps that reduced car CO_2 emissions, their efforts slowed over time. In particular, the implementation of the agreement was shaped by conflicting trends in supply and demand. Carmakers promoted the uptake of more attractive, more profitable but less environmentally-friendly cars. At the same time, consumer demand for both larger and smaller cars increased. These trends illustrated the hegemonic position of the car in the EU, the interdependence of supply and demand, and the

contradictory objectives of promoting economic growth and environmental protection. Further, it was argued that ACEA's strategy to reduce car CO_2 emissions can be seen as a passive revolution, through which its economic interests were prioritised over demands for environmental protection.

A neo-Gramscian analysis of the reformulation of the voluntary agreement suggested that this process was likewise shaped by contestation and compromise among public and private policy actors and across multiple spatial scales. This compromise resulted in the accommodation of the economic interests of the car industry, and specifically those of the manufacturers of larger cars, and German carmakers in particular. At the same time, environmental concerns became more prevalent, as seen in the adoption of mandatory legislation.

Through the examination of the policy cycle of the ACEA agreement, this chapter claimed that some changes were evident in the historical bloc. On the material level, through the rise of climate capitalism, environmental innovation was increasingly seen as a business opportunity. On the organisational level, partnerships among public and private policy actors prevailed. On the ideological level, the emerging bloc was guided by a greening-the-car discourse in which environmental protection was increasingly seen as a prerequisite for promoting economic growth. This reconstituted bloc, nonetheless, served to protect the continued hegemony of the car. Thus, the challenges of reducing car CO_2 emissions remained.

The chapter then examined some possibilities of improving the neo-Gramscian framework. It was argued that insights from international and comparative political economy approaches, as well as institutional perspective, could be incorporated into future theoretical developments. However, the neo-Gramscian perspective offered some important insights into the complexities and contradictions inherent in EU car CO_2 governance, and how these are accommodated through alliances among public and private policy actors, and through material, organisational and ideological practices. The concluding chapter of this thesis turns to examine the contribution of this thesis to existing knowledge, and develops some recommendations for future research.

Chapter 9
The Political Economy of EU Environmental Governance Revisited

Introduction

This thesis set out to examine the possible contribution of a neo-Gramscian political economy perspective to understanding the power relations that shaped EU car CO_2 governance, as seen through the policy process of the ACEA agreement. To this end, a theoretical framework was constructed in Chapter 3. An empirical account of the ACEA agreement was provided in Chapters 5 to 7. Chapter 8 then analysed these empirical findings using the neo-Gramscian framework. Applying the concepts of hegemony, the historical bloc, passive revolution and war of position, Chapter 8 demonstrated that a neo-Gramscian perspective provided a useful framework for understanding how the power relations among various policy actors shaped and were shaped through the policy process of the ACEA agreement; the structural interdependencies among these actors; and how these often-conflicting interests were mediated through material, organisational and discursive practices that served to maintain the dominance of economic interest groups. It was argued that these concepts were useful in providing a critical understanding of the policy process of the ACEA agreement. However, some inconsistencies remained in the theoretical framework. It was therefore concluded that this theoretical perspective could potentially be broadened in order to provide a more comprehensive, multi-level, neo-Gramscian analysis.

This chapter concludes the thesis by critically evaluating the application of the neo-Gramscian perspective. It continues by revisiting the aims and objectives outlined in Chapter 1. It then summarises the main empirical, theoretical and analytical contributions of this thesis to existing knowledge. Following this, the chapter discusses the possible contribution of the neo-Gramscian perspective to the literature on voluntary agreements and NEPIs. The neo-Gramscian framework is critically evaluated, and directions for future research outlined. The chapter concludes that a neo-Gramscian framework has potential to illuminate trends in EU environmental policymaking. However, it needs to be both further theoretically developed and empirically applied to

other case studies in order to provide a more comprehensive contribution to the existing literature on policy instruments, EU environmental governance, and governance processes more broadly.

Aims and Objectives Revisited

To recall from Chapter 1, this thesis set out to explore the possible contribution of a neo-Gramscian political economy perspective to understanding the entire policy cycle of the ACEA agreement.

In order to achieve this aim, the thesis addressed five inter-linked objectives, namely:

1. To outline some prevailing trends in EU transport and car governance.
2. To construct a neo-Gramscian theoretical framework in order to explain the governance of car-CO_2 emissions in the EU.
3. To empirically document the various stages of the policy cycle of the voluntary agreement.
4. To examine the power relations that shaped the full policy cycle of the ACEA agreement using this framework, including the dynamics among economic, political and environmental actors in this policy arena.
5. To assess the usefulness of the neo-Gramscian political economy framework in explaining the policy process of the ACEA agreement and EU governance of car CO_2 emissions more broadly.

Chapter 2 addressed the first objective of this thesis. It discussed some of the trends that shaped EU transport and car governance. The growing share of road transport in general and passenger cars in particular meant that the EU's transport system became increasingly unsustainable. Since the 1990s, the EU addressed this problem in consecutive policy documents, but to little avail. Consequently, GHG emissions from

the transport sectors rose steadily since 1990. Conversely, the EU invested significant resources in creating a trans-European road network. Thus, conflicting objectives in EU transport governance were noted. Some more specific trends in EU car governance were then examined. From the 1980s, European carmakers experienced a trend of privatisation and increasingly became a trans-nationalised industry sector. A close working relationship developed among carmakers and the EU institutions, and notably the Commission. At the same time, close connections also remained between carmakers and Member States. The chapter then examined in some detail developments in the EU's policies on car emissions from the 1970s onwards. The economic origins of these regulations were noted. In the 1980s, EU regulations on car emissions were seen as a means of promoting national economic competitiveness, notably of German carmakers. These measures therefore became contested. From the 1990s, the governance of car emissions was characterised by a more participatory nature, in an attempt to overcome conflicts among various policy actors. In summary, Chapter 2 outlined some of the complexities inherent in EU transport and car governance; and the contradictions between transport and economic growth, and environmental protection.

The second objective was addressed in Chapter 3. It was argued that some existing theories of EU governance, namely multi-level and network governance approaches, offered a framework for describing the complex relations among various policy actors, but did not provide an adequate explanation of these relations. A neo-Gramscian critical political economy perspective was identified as a suitable contender for explaining the complexities and contradictions inherent in EU car CO_2 governance. An innovative framework drawing from the work of Antonio Gramsci, and informed by more recent scholarship from various disciplines, was constructed. This framework was based on the concepts of hegemony, historical bloc, passive revolution and war of position. The framework was then preliminary tested to promote an understanding of EU car governance.

Chapters 5 to 7 explored in detail the policy process of the ACEA agreement, as set out in the third objective of the thesis. Chapter 5 examined the choice and design of the voluntary agreement, from the arrival of the issue on the EU's policy agenda in 1991,

until the signing of the ACEA agreement in 1998. The chapter documented the bargaining among public and private policy actors, and across multiple spatial scales, and examined how these shaped the uptake of a voluntary agreement. Chapter 6 then inspected the implementation of the ACEA agreement. It looked at the efforts of policymakers to ensure the implementation of the agreement, the role of environmental NGOs and the strategies of the car industry. It then investigated in some detail the counteracting trends that shaped the implementation of the agreement. The interconnection of supply and demand in shaping the agreement were noted, and hence the interdependencies among carmakers, consumers and politicians. Chapter 7 then outlined the reformulation of the voluntary agreement, from the first calls for legislation in 2003, to the adoption of mandatory targets to reduce CO_2 emissions from cars in 2009. It was observed that this process was shaped by intense political bargaining amongst carmakers, Member States, environmental NGOs and the EU institutions.

Chapter 8 applied the neo-Gramscian approach constructed in Chapter 3 to examine the power relations that shaped the different stages of the ACEA agreement, as outlined in the fourth objective of this thesis. Applying this perspective, it was argued that the choice and design of the voluntary agreement can be seen as a strategy of economic actors to accommodate environmental demands. This strategy, nonetheless, served to protect the hegemonic position of the car. The examination of the implementation of the agreement revealed complex and contradictory interactions among economic actors, consumers, environmental NGOs and policymakers. These contradictions resulted in the failure of the voluntary agreement, and the introduction of mandatory legislation. The reformulation of the ACEA agreement was also shaped by political bargaining among various policy actors at different spatial scales. Despite the fact that mandatory legislation was agreed, economic interests were still prioritised over environmental protection. Overall, the policy process of the ACEA agreement revealed a continuous process of contestation and compromise among economic, social, environmental and political actors, in which economic interests were prioritised, while some concessions were made to appease other policy actors.

Following this, Chapter 8 turned to address the fifth objective, to assess the usefulness of the neo-Gramscian political economy framework in explaining the policy process of the ACEA agreement. It was argued that a neo-Gramscian framework helped explain not only the relations of power among various policy actors, but also material, organisational and discursive practices that constructed - and were constructed by - the historical bloc. It was argued that the historical bloc governing the car was reconstructed in order to reconcile conflicting economic and environmental demands. The 'greening the car bloc' was guided by the conception that technological innovation is necessary for the resolution of tensions between economic growth and environmental protection. It successfully integrated the ecological modernisation discourse, so that environmental protection was increasingly perceived as a prerequisite for promoting economic growth. In order to promote these synergies, there was a growing recognition of the need for 'flexible' policy instruments and international climate agreements to ensure a level environmental and economic playing field. However, tensions between economic growth and environmental protection remained. Thus, Chapter 8 concluded that a neo-Gramscian perspective provided a framework for understanding the 'messy politics' (Jordan et al. 2011: 537) that shaped EU car CO_2 governance. It then proposed some possible modifications to this framework, and the incorporation of insights from other theoretical perspectives. Nonetheless, it was argued that a neo-Gramscian perspective contributed to existing knowledge, as discussed below.

Evaluating the Contribution of this Thesis to Existing Knowledge

The unique contribution of this thesis to the existing literature can be divided according to empirical, theoretical and analytical dimensions. Empirically, two main contributions can be discerned. Firstly, Chapter 2 provided an account of some of the salient trends in EU transport and car governance to date. This is an important contribution to understanding the context in which EU car CO_2 governance developed, and the challenges the EU faced in reducing CO_2 emissions from the transport sector more broadly. This is a timely analysis, as the EU is at present amidst debates on how to achieve a sustainable transport roadmap for 2050, as set in the 2011 transport White

Paper (CEC, 2011b). Through understanding the contradictory nature of economic, environmental, social and political interests, and the interactions among these policy actors, it is possible to make clearer observations regarding EU transport and car governance, and to provide normative recommendations for resolving these tensions (as discussed later in this chapter).

Secondly, this thesis provided an in-depth empirical account of the *entire* policy process of the ACEA agreement. Chapters 5 to 7 provided a detailed account of the choice, design, implementation and reformulation of the voluntary agreement. Several studies examined different stages of the ACEA agreement. For example, Keay-Bright (2000, 2001) examined the choice and design of the agreement, while ten Brink (2010) examined the reformulation of the agreement and the uptake of mandatory legislation. The unique contribution of this thesis lies in the compilation of a large number of data sources into a coherent and comprehensive account of all stages of the voluntary agreement. Data from the Commission and other EU institutions, the car industry, environmental NGOs, consultancy firms, academic studies and the mass media were compiled into one comprehensive empirical account of the entire policy cycle of the voluntary agreement. This account provided insights into the political bargaining, contradictory interests and other factors that shaped the uptake, implementation and reformulation of the ACEA agreement. This account can provide a useful resource for scholars wishing to study future developments in EU car CO_2 governance, and looking to draw comparisons with past policy measures and experience. It could also provide the basis for a comparative account, contrasting the EU's attempts to govern car CO_2 emissions to those in other jurisdictions. Furthermore, the empirical account of the ACEA agreement could provide the basis for a theoretical analysis drawing from different theoretical approaches.

Theoretically, this thesis promoted a critical neo-Gramscian political economy understanding through several related measures. Firstly, it synthesised a neo-Gramscian perspective, based on the work of Antonio Gramsci and inspired by more recent scholars from various disciplines. This thesis developed a unique Gramscian-inspired theoretical perspective. This perspective was then applied to a case study in EU

environmental governance (that is, the ACEA agreement). Although neo-Gramscian perspectives have been applied to the study of EU governance, and to the study of international environmental governance (as discussed in Chapter 3), they have not previously been applied to EU environmental governance. Thus, through the application of a neo-Gramscian perspective, this thesis provided an original theoretical contribution to the literature on EU environmental governance.

Moreover, this thesis constructed an accessible and easily applicable theoretical framework. The neo-Gramscian perspective employed in this thesis can be tested on other case studies. It is accessible to a wider audience, including academics from other disciplines, and other interested parties. As Davies (2011: 137) noted, neo-Gramscian scholars 'often write in an idiom that makes their work difficult for non-specialists'. In order to ensure analytical clarity and accessibility this thesis therefore constructed a theoretical framework that can be applied by non-Gramscian scholars. It aimed to simplify some of the many complexities inherent in Gramsci's work and neo-Gramscian perspectives, while retaining the core principles and underlying values.

Analytically, the neo-Gramscian framework constructed in this thesis provided an explanation of the 'messy politics' (Jordan et al. 2011: 537) that shaped the policy process of the ACEA agreement. The application of this framework to the case study of the ACEA agreement provided an analysis of 'the ways in which coalitions are formed between state, capital and civil society in order to preserve the hegemony of blocs whose interests are threatened by environmental regulation' (Newell, 2008: 516). Thus, the findings of this thesis provided insights into the power relations among policy actors, and how these shaped the policy process of the ACEA agreement. Further, the analysis of this thesis shed light on the material, organisational and discursive practices that were employed in order to reconcile contradictions and conflicts between economic and environmental interests in the historical bloc governing EU car CO_2 emissions. Through the application of a neo-Gramscian framework, this thesis provided a critical analysis of the problems of governing EU car CO_2 emissions. The following section continues by examining the contribution of a neo-Gramscian perspective to understanding voluntary agreements.

Understanding Voluntary Agreements: a Neo-Gramscian Perspective

Chapter 1 reviewed the literature on voluntary agreements according to its emphasis on policy stages. Two points of criticism were made. Firstly, it was argued that this literature was predominantly concerned with the analysis of individual stages in the policy cycle of voluntary agreements, without examining the whole policy process (Porter and Ronit, 2006: 45). Secondly, it was argued that this literature often assumes that voluntary agreements are neutral, pragmatic policy instruments. Therefore, this literature takes for granted the power relations that shape policy processes of voluntary agreements. In contrast, this thesis tested the argument that the analysis of voluntary agreements should reveal 'the real strength of *all* parties' (Cunningham and Clinch, 2004: 35, emphasis added) involved in *all* stages of the policy process. This section therefore examines the contribution of this thesis to understanding voluntary agreements.

The literature on voluntary agreements often takes for granted the close relationships between policymakers and private policy actors, rather than questioning and critically examining them. In contrast, the neo-Gramscian perspective employed in this thesis examined how the interactions among public and private policy actors shaped the choice of a voluntary agreement as the EU's principal policy instrument to reduce CO_2 emissions from cars. Chapter 5 demonstrated that a voluntary agreement was employed in an attempt to reconcile competing economic and environmental demands across multiple spatial scales. Chapter 8 then argued that from a neo-Gramscian perspective, the choice of a voluntary agreement was emblematic of a neo-liberal historical bloc that became dominant in the EU since the 1980s. This bloc was guided by an imperative to reduce the intervention of policymakers in market activities, and hence enhance the power of economic actors. In terms of industry strategy, the advocacy of voluntary agreements was further seen as a neo-Gramscian passive revolution. This strategy accommodated environmental concerns whilst ensuring the continued power of economic actors. The choice of voluntary agreements therefore needs to be understood as a strategy to maintain the hegemony of economic actors,

through the accommodation of environmental demands, and the reconciliation of these competing interests through material, organisational and ideological practices.

The design of the ACEA agreement shed further light on the power relations that shaped these instruments. The negotiations on the design of the ACEA agreement were conducted between carmakers and the Commission. These negotiations were closed to other policy actors, and therefore resulted in a voluntary agreement that favoured the economic interests of carmakers, while only making small concessions to environmental protection. This observation is strengthened by comparing the best-practice guidelines for the design of voluntary agreements with the terms of the ACEA agreement. These findings are summarised and compared to the reformulation of the ACEA agreement in table 9.2 later in this section. Although the targets of the agreement were well defined, as prescribed by the literature, they were arguably unambitious, did little to promote innovation, and did not deter free-riding. Further, sanctions for non-compliance were not agreed upon, and the threat of mandatory legislation remained distant. While monitoring arrangements were in place, they institutionalised cooperation between the Commission and ACEA, which together produced annual implementation reports. Although data on the progress of the car industry as a whole was published in these reports, the reports excluded data on the progress of individual carmakers. Thus, the voluntary agreement did little to influence the reputation of individual carmakers. Further, as discussed above, the agreement lacked transparency and participation of third parties. Overall, the design of the ACEA agreement favoured the economic interests of carmakers, while compromising the need for environmental protection. The design of the voluntary agreement therefore allowed carmakers a great deal of autonomy in its implementation.

A neo-Gramscian analysis of the implementation of the voluntary agreement allowed for a further examination of the power relations among public and private policy actors. Through the notions of hegemony, the historical bloc, passive revolution and war of position, insights were gained into both the interactions among various policy actors, and the broader material, organisational and discursive practices that shaped the implementation of the ACEA agreement. The car industry was seen to be

engaged in a neo-Gramscian passive revolution through which it accommodated environmental concerns, while ensuring its continued economic, social and political dominance. Civil society was seen as a site of securing the car's hegemony, through the continued demand for car use, and the uptake of (on average) larger, faster, more powerful cars. Consumer demand was fuelled by marketing strategies of carmakers. Hence, contradictions were noted between the interests of promoting environmental protection and economic competitiveness.

The involvement of environmental NGOs in the implementation of the agreement was examined using the Gramscian concept of war of position. While environmental NGOs did engage in political efforts to influence the implementation of the ACEA agreement, they did not employ a successful war of position to encourage change in civil society. Rather, their efforts were framed through the debates on consumer demand, economic growth, oil security and promoting the competitiveness of the car industry in a low-carbon economy. These competing economic, environmental and social interests were aligned in the historical bloc governing the car, and its guiding ecological modernisation discourse. The practices within this bloc served to protect the hegemony of the car. However, carmakers did not meet the voluntary targets set under the agreement, and environmental interests were consequently further compromised.

In evaluating voluntary agreements, the criteria outlined in Chapter 1 are useful in examining changes in the historical bloc. By examining the static and dynamic efficiency of the ACEA agreement and its environmental effectiveness, dissemination of information and participation insights can be gained into the evolving relations of power among actors in the historical bloc. Table 9.1 provides an overview of these evaluation criteria, and compares them to the outcomes of the ACEA agreement. A word of caution: This evaluation is not based on exact calculations; it is not compared to a base-line, business-as-usual scenario; or to alternative policy instruments. Rather, it is a summary of the outcomes of the ACEA agreement, as outlined in reports by the Commission, carmakers, environmental NGOs, academics and investor groups. Therefore, it provides a qualitative rather than a quantitative evaluation of the ACEA agreement.

Evaluation criteria	Outcome of ACEA agreement	Comments
Environmental effectiveness	**X**	• Carmakers did not achieve voluntary target. • Overall car CO_2 emissions increased.
Economic efficiency	**?**	• Difficult to assess due to carmakers tendency to exaggerate compliance costs. • Evidence of free-riding suggests that some carmakers incurred greater costs than others.
Innovation efficiency	**VX**	• Agreement required only incremental technological innovations. • Carmakers developed some know-how into low carbon technologies.
Transparency and legitimacy	**X**	• Design of the agreement was not transparent. • Data on progress of individual carmakers was not made public. • Although participation and transparency increased over time, carmakers were still privileged actors.
Information-diffusion	**V**	• Policymakers, academics and NGOs gained access to information on CO_2 emissions reductions.

V = Successful outcome X = Unsuccessful outcome VX = Partially successful outcome ? = Uncertain outcome

Table 9.1: Evaluating the ACEA agreement

Source: Alberini and Segreson (2002: 159)

From the analysis summarised in Table 9.1, it can be seen that the ACEA agreement resulted in a partial realignment of economic, environmental and political forces and practices, whilst maintaining the relative influence of the car industry. To illustrate, the decade of implementation of the ACEA agreement resulted in growing investment in R&D for low carbon technologies, and therefore strengthened the economic position of the car industry in light of the threat of climate change. At the same time, environmental groups gained greater access to the policymaking process. The close cooperation between carmakers and policymakers (and notably the Commission) resulted in the dissemination of information to public and private policy

actors. Thus, to a certain extent, information asymmetries were corrected. However, there is no doubt that the voluntary agreement failed to meet its environmental objectives, necessitating further regulatory intervention.

The reformulation of the voluntary agreement was equally shaped by contestation and compromise among actors in the historical bloc. Economic interests, both at the industry and Member-State level, were detrimental in shaping the reformulation stage. Environmental concerns did, at the same time, become more prominent. Participatory measures were also promoted through the employment of working groups and public consultations. Lessons from the failure of the ACEA agreement were learned in the agreement on mandatory legislation. Table 9.2 illustrates this point by comparing the best-practice criteria for the design of voluntary agreements with both the design of the ACEA agreement and the mandatory legislation. A quick glance at this table shows that there are many more "Vs" in the design of the mandatory legislation than in that of the voluntary agreement. However, the extent to which the legislation promoted innovation is debatable. As mentioned above, CO_2 emission-reduction targets were subject to intense political bargaining, and resulted in a compromise among various policy actors. Environmental groups claimed that these targets were unambitious and did not promote innovation. Carmakers protested this claim, and said the targets would be difficult to achieve. Reports on the implementation of the legislation supported the claims made by environmental NGOs. Data published on the progress of carmakers for 2010 showed that most carmakers already met targets set for 2012, and were likely to exceed regulatory demands. The targets agreed under the legislation can therefore be seen as unambitious. Thus, the compromise reached under the mandatory legislation can still be perceived as promoting economic over environmental interests.

Design criterion	Best practice guidelines	Design of the ACEA agreement	Design of Mandatory legislation
Targets	• Well defined	V	V
	• Ambitious goals	X	VX
	• Promote innovation	X	VX
	• Ensure competitiveness	X	V
	• Deter free-riding	X	V
Sanctions	• Regulatory threat	X	V
	• Financial disincentives	X	V
Monitoring	• Reliable and credible monitoring	V	V
Participation	• Information-provision	VX	V
	• Transparency	X	V
	• Participation	X	V

V = Full execution; VX = Partial execution; X = Not executed

Table 9.2: Design and reformulation of ACEA agreement: comparing theory and practice

Source: OECD (1999: 134-135)

From this analysis, it can be concluded that voluntary agreements cannot be seen as neutral policy instruments. Rather, a neo-Gramscian account suggests that these agreements are shaped by power relations among various public and private policy actors. Further, these instruments also shape the relations of power among these actors, determining who will be involved in their implementation, and which actors will be privileged in this process. The neo-Gramscian concepts of hegemony, the historical bloc, passive revolution and war of position provided useful tools for examining the interactions among policy actors involved in all stages of the voluntary agreement. This analysis suggested that the advocacy of voluntary agreements was emblematic of a hegemonic neo-liberal bloc, which promoted the power of economic actors. The uptake of voluntary agreements was further perceived as a passive-revolution strategy, aimed at ensuring continued hegemony of economic actors, while accommodating environmental concerns. By examining the entire policy cycle of the ACEA agreement, it was possible

to make more nuanced observations about how the historical bloc evolved through dynamic processes of contestation and compromise between hegemonic and counter hegemonic groups. The neo-Gramscian analysis shed light on the interactions among economic, social and political actors, and how these were mediated through material, organisational and ideological practices. However, in order to draw more general conclusions regarding the validity of a neo-Gramscian perspective in explaining voluntary agreements, there is a need for further empirical and theoretical analysis. The following section turns to examine the possible contribution of a neo-Gramscian approach to understanding NEPIs and policy instruments more broadly.

A Neo-Gramscian Perspective on New Environmental Policy Instruments

The findings of this thesis provided a unique contribution to the literature on NEPIs, and the wider literature on the 'new governance' of policy instruments, introduced in Chapter 1. Much of the literature on NEPIs, dominated by economists, assumes these are neutral tools that produce specific effects. This literature largely ignores 'the messy politics commonly dividing theory from reality' (Jordan et al. 2011: 537). Thus, it does not explain how policy instruments shape and are shaped through the interactions among various policy actors. In contrast, political scientists often provide detailed empirical accounts of the interactions that shape the uptake of NEPIs, without providing a theoretical explanation of policy instruments (ibid.). The new governance literature acknowledges that policy instruments are highly political and emblematic of increasing interdependencies between public and private policy actors. However, this literature has not adequately addressed the questions of '*who* these actors are, and *why* and *how* they act the way they do' (Howlett, 2011: 145, emphasis added). These are important questions to answer in order to better understand policy instruments and instrumentation (ibid.). The remainder of this section therefore examines the contribution of a neo-Gramscian perspective to understanding the complexities and contradictions inherent in the choice of policy instruments and their instrumentation. Specifically, it is argued that a neo-Gramscian approach can help conceptualise the *who*, *how* and *why* questions of policy instruments and instrumentation.

Firstly, a neo-Gramscian perspective can answer the question of *who* are the actors involved in a given policymaking process, and their relative power vis-a-vis one another. To recall from Chapter 3, Gramsci perceived the political arena as an 'extended state', which included not only political society and its institutions, but also civil society, comprised of economic actors, other social groups and 'organic intellectuals' (Gramsci, 1971: 262-263). This perception sheds light on the role of policymakers, corporate elites, organic intellectuals and other groups within civil society in shaping policymaking (Davies, 2011: 117). A neo-Gramscian analysis acknowledges the structural power of capital (the hegemonic group), and the interdependence between economic interest groups and political society in their quest to secure power through continued economic growth (Davies, 2011: 90-91). Further, it recognises the role of civil society both in ensuring the continued dominance of a hegemonic group, and as a site of its contestation. Environmental interest groups can, in this view, be seen as counter-hegemonic groups challenging the dominance of the capitalist class. Although structurally disadvantaged, these groups hold strategic power, and can influence the policy cycle by rallying support within civil and political society. Thus, a neo-Gramscian approach offers a framework for understanding the 'asymmetric interdependencies' among various policy actors (Salamon, 2002: 13).

Secondly, a neo-Gramscian perspective can help examine *how* NEPIs are shaped by and shape the interactions among policy actors with conflicting policy goals. A neo-Gramscian perspective

> [S]eeks to go beyond some of the more reductionists elements of structural accounts to look at the ways in which coalitions are formed between state, capital and civil society in order to preserve the hegemony of blocs whose interests are threatened by environmental regulation (Newell, 2008: 516).

In a neo-Gramscian view, the prevalence of environmental problems, and climate change most prominently, posed a threat to existing capitalist patterns of production and consumption, endangering the operations of economic actors and associated accumulation regimes (Levy, 2005: 76; Newell, 2000: 98). In order to accommodate environmental demands, economic interest groups advocated the uptake of NEPIs. These instruments were seen as a means of enabling 'private actors to pursue their

economic interests in ways which simultaneously promote sustainability' (Paterson, 2009: 107). Therefore, they can be conceptualised as a passive revolution strategy, aimed at securing the continued power of economic groups. Policymakers, who were structurally dependent on the success of economic groups, also supported the uptake of NEPIs. As a result, alliances were formed among economic, social and political actors. These alliances were shaped through material, organisational, and discursive practices (Levy and Newell, 2005: 50). The advocacy of NEPIs can therefore be seen as indicative of changing power relations among economic, political and social actors (Newell, 2008: 518).

Further, the popularity of NEPIs needs to be understood in the wider context of the 'politics of neo-liberalism' (Newell, 2008: 522). In this view, the 'modalities, ideologies and forms which environmental governance assumes inevitably bear the characteristics of the neoliberal economy of which they are part' (ibid.). Thus, material, organisational and discursive practices that served to maintain a hegemonic order can be seen as a neo-liberal environmental strategy. The material investment in low carbon technologies and eco-innovations, promotion of partnerships, and prevalence of the ecological modernisation and sustainable development discourses resulted in the reconfiguration of a 'sustainable development historical bloc'. The function of this bloc was 'to distance global capitalism from the sources of environmental problems' (Newell, 2008: 516). These practices accommodated environmental concerns while maintaining the dominance of economic actors. As a result, efforts to govern environmental problems, which 'started out as attempts to regulate the side effects of existing forms of capitalist development, have increasingly been organised to channel capitalism in novel directions' (Paterson, 209: 99).

These observations lead to a third possible contribution of a neo-Gramscian approach to explaining *why* policy instruments (seem) to be autonomous and produce 'specific effects, independently of the objective pursued' (Lascoumes and le Galès, 2007: 3). Each policy instrument has its own 'political economy' (Salamon, 2002: 2). Thus, policy instruments are 'a form of power. Rarely are they neutral devices; rather they produce specific effects' (Kassim and Le Galès, 2010: 5). A neo-Gramscian

approach perceives policy instruments and instrumentation as emblematic of processes of contestation and compromise among hegemonic and counter-hegemonic groups, and the continuous alignment and realignment of material, organisational and discursive practices. Thus, 'policy responses and the governance structures that give rise to them are understood as products of a particular configuration of historical and material circumstances' (Newell, 2008: 519). Since hegemony 'is a struggle, not an accomplished fact' (Davies, 2011: 106), the outcomes of these struggles are not pre-determined, but constantly evolve and result in the reconfiguration of historical blocs. While the choice of policy instrument might reflect the balance of powers in the historical bloc at a given historical moment, this balance changes over time, and thus determines policy instrumentation.

To illustrate, from a neo-Gramscian perspective the reformulation of the ACEA agreement and its replacement with mandatory legislation can be seen as evidence of changes in the historical bloc governing the car. The alliances among different actors, and the alignment of material, organisational and discursive practices, necessitated a change in policy instruments. The voluntary agreement, which secured carmakers' continued dominance in the 1990s, became outdated by the mid-2000s. Carmakers developed some material capacity and technological know-how, partnerships to promote these innovations were institutionalised, and the ecological modernisation discourse was widely embraced. In light of the financial crisis of the car industry and wider economic crises, environmental innovation was increasingly seen as a means of rescuing carmakers from economic downturn. These factors necessitated greater policy intervention and a change of policy instruments towards more 'responsive regulation' (Ayres and Braithwaite, 1992). However, the shift in policy instruments was still rationalised in terms of promoting the competitiveness of carmakers. Thus, the historical bloc governing the car was only marginally reconstituted, and still served to promote the hegemony of economic actors, while accommodating conflicting economic, environmental, social and political demands.

In summary, the neo-Gramscian perspective employed by this thesis provided some unique insights into the instruments and instrumentation of NEPIs, and policy

instruments more widely. Firstly, it offered a framework for understanding *who* are the policy actors involved in policymaking processes, and the asymmetrical distribution of power among them. Secondly, it provided a means for conceptualising *how* the interactions among policy actors shaped, and were shaped by, policy instruments and instrumentation. Thirdly, it helped explain *why* policy instruments might produce autonomous effects. Considering that policy instruments increasingly 'require developing the means for managing multiple relationships among actors that may have conflicting goals' (Peters, 2005: 363), the neo-Gramscian approach developed and applied in this thesis can contribute to the existing literature on NEPIs and policy instruments more broadly. However, some shortcomings need to be addressed in order to provide a more comprehensive analytical framework. The following section provides a critical evaluation of the neo-Gramscian framework.

Evaluating the Neo-Gramscian Framework

This section critically examines some of the main analytical advantages and disadvantages of this framework. It then examines how the concept of the war of position can be applied to challenge the hegemonic position of the car in European society. The section concludes that while a neo-Gramscian perspective offers some unique analytical and normative insights into EU car CO_2 governance, future research is needed in order to bring together the rich empirical data collected in this thesis and the neo-Gramscian framework, which remains at a high level of abstraction.

The Pros and Cons of the Neo-Gramscian Approach

As discussed above and in Chapter 8, the neo-Gramscian perspective employed in this thesis offered some unique insights into EU governance of car CO_2 emissions, and the use of voluntary agreements and NEPIs more broadly. Three key advantages of the neo-Gramscian framework were demonstrated. Firstly, the framework offered a theory of power, which is often not present in multi-level and network governance accounts of EU governance. The neo-Gramscian framework acknowledged the structural power of capital, but also the strategic power of other policy actors such as environmental NGOs.

Therefore, it avoided the economic determinism often present in political economy accounts, and allowed for a deeper understanding of the relations of power among a multitude of policy actors (Laclau and Mouffe, 1981: 143-144).

Secondly, the neo-Gramscian analysis provided a framework for explaining the complex interactions and compromises among a multitude of policy actors, and how these processes shaped and were shaped through the policy cycle of the ACEA agreement. A similar conclusion was reached by Newell and Levy (2005: 340), who argued that a neo-Gramscian framework offered a 'more systemic understanding of dynamic processes of political contestation over environmental governance'. Thirdly, the neo-Gramscian framework adopted in this thesis accounted for some wider shifts in material, organisational and ideological practices in the historical bloc governing EU car CO_2 emissions. These insights allowed for a unique understanding of the evolution of EU car CO_2 governance over approximately two decades, since its inception in the early 1990s.

However, the framework did not adequately explain the rich empirical detail collected using the fine-grained process tracing methodology. Several shortcomings need to be addressed in order to construct a more comprehensive analytical account. Firstly, the neo-Gramscian framework developed in this thesis did not sufficiently explain the role of public actors, both at Member-State and the EU level, in shaping the policy process of the ACEA agreement. In neo-Gramscian perspectives, political institutions reflect the 'balance of forces within civil society' (Simon, 1991: 75). Chapters 5 to 7 illustrated with great detail how inter and intra-institutional conflicts among the EU institutions shaped the policy process of the ACEA agreement. According to the neo-Gramscian perspective, these conflicts were expected to reflect struggles among economic, environmental and other societal groups. Some of these tensions, and particularly inter-Commission disputes between DGs Industry and Environment could be explained along these lines of analysis.

This interpretation is somewhat simplistic, and does not adequately account for *all* conflicts among the EU institutions. For example, the European Parliament, long seen as the EU's 'greenest' institution (Lenschow, 2005: 316; Sbragia, 2000: 302) and a

supporter of strong policy measures on car CO_2 emissions, developed a more accommodating approach towards the economic interests of the car industry in the reformulation stage of the voluntary agreement. Further, the Commission's quest to establish its political power, as seen particularly in the choice and design stages of the voluntary agreement, could not be adequately explained using the neo-Gramscian framework. In order to understand the power dynamics among and within the EU institutions, a more nuanced theoretical perspective is required.

Similarly, the neo-Gramscian perspective could not account for differences at the Member State level. Member States' interests were seen as shaped by the economic interests of domestic carmakers and other social forces. This analysis did not allow for an in-depth examination of differences within and among Member States. It did not account for how differences in national varieties of capitalism shaped the policy process of the ACEA agreement. Further, it did not explain the relative power of Member States vis-a-vis one another. To illustrate, from the empirical analysis, it was clear that some Member States played a more important role than others in shaping the policy process of the ACEA agreement. Notably, Germany and France were influential in the choice and reformulation stages of the ACEA agreement. These relations of power were not explained through the neo-Gramscian approach.

These shortcomings suggest that while the neo-Gramscian framework allowed for a critical understanding of *some* of the complexities inherent in EU car governance, it could not explain *all* of these complexities. In neo-Gramscian perspectives, although political society is considered 'an important analytical category, it is regarded as a structure within which and through which social forces operate rather than an actor in its own right' (Bieler and Morton, 2001: 18). Thus, although the neo-Gramscian perspective provided insights into the strategic and structural relations of power that shaped EU car CO_2 governance, it did not satisfactorily account for the 'hard' relational power of political institutions both at Member State and at the EU-level. This finding resonates with those of other neo-Gramscian scholars, who argue that a neo-Gramscian perspective does not offer an adequate theory of the state and political institutions (Bieler and Morton, 2001: 120; Morton, 2007: 120; Showstack Sassoon, 1987: 118-

119). The theoretical framework of this thesis therefore emphasised the role of private policy actors, while neglecting the role of public actors at various spatial scales. This imbalance needs to be addressed in future work, perhaps by combining a neo-Gramscian perspective with other theoretical frameworks, as discussed in the following section.

Another shortcoming relates to the role of carmakers in shaping the policy process of the ACEA agreement. Although the empirical chapters, and particularly Chapters 6 and 7, acknowledged the strategic differences among carmakers in their response to the voluntary agreement, these were not well accounted for in the theoretical framework. The thesis treated carmakers as a homogenous group, with a shared interest of profit maximisation. A more nuanced analysis would account for the different strategies of carmakers in addressing the problem of reducing CO_2 emissions of new cars, and examine rivalry within this class fraction (van Apeldoorn, 2002: 26). Research in this vein was carried out by Levy and Rothenberg (2002) and Levy and Egan (2003), who examined differences among European and U.S carmakers; and Mikler (2009) who examined differences in the strategies of German, Japanese and U.S carmakers. This line of analysis would allow for a more nuanced empirical and theoretical account, and for the identification of 'struggle among fractions within the hegemonic bloc itself' (Davies, 2011: 107).

The final shortcoming of the theoretical framework relates to the explanatory power of the concept of war of position in analysing the strategies employed by counter-hegemonic environmental NGOs. There is no doubt that environmental NGOs influenced the policy process of the ACEA agreement, particularly at its implementation and reformulation stages. As illustrated in Chapters 5 to 7, environmental NGOs were strongly opposed to the voluntary agreement. They monitored carmakers' implementation efforts and warned against non-compliance, advocated regulatory measures to replace the voluntary approach, and were part of various working groups and consultation processes at the reformulation stage of the agreement. The uptake of mandatory legislation in 2009 illustrated, at least to some extent, the growing importance of environmental interests in shaping EU car CO_2

governance. In Chapter 8, it was argued that from a neo-Gramscian perspective, environmental interests were ultimately subverted to economic considerations. Environmental NGOs were seen as incorporated into the hegemonic historical bloc, which was reconstituted through a passive revolution strategy undertaken by carmakers. It was therefore concluded that environmental NGOs did not succeed in their war of position. However, this analysis might undermine the influence of environmental groups over EU car CO_2 governance, and raises questions regarding the adequacy of the concept of the war of position in explaining these struggles. In particular, questions arise as to what constitutes a successful war of position strategy, how this can be measured, and how could a successful war of position be brought about?

It would therefore be useful to define from the outset what would constitute a successful war of position. According to Gramsci (1971: 239), the war of position, 'once won, is decisive definitively'. That is, only when a counter-hegemonic group 'has won the battle of hegemony will it have triumphed definitively' (Showstack Sassoon, 1987: 196). However, the question remains as to how to define the winning of the battle. For the purpose of this thesis, would counter-hegemonic groups win the war of position once car use was eliminated? Would the battle be won by reducing car-dependence in European society? Or could a shift towards low carbon car technologies be seen as (at least a partial) victory in the war of position? Paterson (2007: 193) distinguishes between "strong" and "weak" strategies for the greening of the car. "Strong" greening entails a shift away from car dependence, whereas "weak" greening is achieved by the 'greening of the car' through technological developments. The "strong" version of greening is more compatible with a Gramscian understanding of the war of position. However, if car hegemony is framed in terms of the dominance of a fossil-fuelled historical bloc (Levy and Egan, 2003: 804), then the 'greening of the car' and a shift to low carbon technologies could perhaps be seen as a sufficient condition for a successful war of position. It is therefore important to define from the outset the preconditions for a successful war of position. Different scenarios could be placed on a continuum from a "weak" to "strong" war of position.

There are additional difficulties in operationalising the concept of war of position in the analysis of the ACEA agreement. The war of position, as envisioned by Gramsci, is a prolonged and protracted strategy which requires 'patience and inventiveness' (Femia, 1981: 192). Thus, it might not be appropriate to apply this concept to the analysis of the relatively short policy cycle of the ACEA agreement. Instead, it might be more fruitful to view the strategy of environmental NGOs as one stage in the prolonged battle of the war of position. This conception allows for a more nuanced understanding of the strategies of environmental NGOs, and the re-evaluation of these strategies ahead of the next stage in the war of position.

The difficulties of applying the concept of passive revolution to theorise the influence of counter-hegemonic groups are aptly explained by Showstack Sassoon (1987: 193), who claims that

> The question of the context of a strategy and even more so that of tactics cannot be answered at the level of theory since it depends on a particular analysis of a specific concrete social formation.

Thus, only once a theoretical analysis of the conjuncture of social forces has been carried out can a passive revolution strategy be devised (ibid.). This interpretation is in line with Gramsci's use of the concept of war of position to explain how a revolutionary change could be brought about (Rupert, 1993: 79) through the integration of divergent aims and interests into a new historical bloc (Gramsci, 1971: 168, Morton, 2007: 98). The remainder of this section therefore examines how the concept of passive revolution can be applied to prescribe a break from the hegemony of the car.

Towards a War of Position against Car Hegemony

Whether "strong" or "weak" greening of the car is seen as the end result of the war of position, the concept implies some general lines of action. The war of position 'constituted a longer term strategy, coordinated across multiple bases of power, to gain influence in the cultural institutions of civil society, develop organizational capacity, and to win new allies' (Levy and Newell, 2005: 51). As such, it required action on the ideological, organisational and material levels.

On the material front, alternatives to car use need to be established. A "strong" war of position would entail investment in public transport, encouragement of walking and cycling, and fundamentally a shift in urban planning ideologies and practices in order to move away from car dependence (Paterson, 2007: 203). Dennis and Urry (2009: 149) describe a 'local sustainability' scenario which 'envisions a network of self reliant [...] communities in which people live, work and mostly recreate'. A weaker war of position and the 'greening of the car' would equally require efforts on the material front. In particular, investment in low carbon technologies and fuelling infrastructures would need to be accelerated in order to achieve this goal. Irrespective of the aim of the war of position,

> [A]ttempts either to 'green' cars or to move beyond automobility need to be articulated as an element in an overall accumulation strategy, which will enable either a transformation of the structural power of car firms to become an ally rather than an obstacle in the greening process, or require finding a set of other business groups which can serve to overcome continued opposition from car firms (Paterson, 2007: 209).

Thus, the war of position will require a shift in broader material practices and regimes of accumulation, as well as organisational changes, as discussed below.

On the organisational front, the war of position requires the establishment of new partnerships among a multitude of public and private actors. In order to challenge the hegemonic order, these alliances need to be built from the bottom up (Bieler and Morton, 2001: 213). This process requires compromises that allow for these groups to be integrated into the counter-hegemonic historical bloc, while maintaining their autonomy (Femia, 1981: 193; Simon, 1991: 46). This alliance should include 'all the social movements which are striving to transform the relationships within civil society' (Simon, 1991: 75), and could emanate from EU civil society (Bieler and Morton, 2001: 213-214). A successful war of position 'requires the unification of a variety of different social forces into a broad alliance expressing national-popular collective will' (Simon, 1991: 25). At the time of writing these conclusions, in May 2012, various social actors can be identified as potential allies in this war of position. In addition to environmental groups, new social movements such as the global "Occupy" movement and the "Transition Towns" movement in the UK could act as agents for change, particularly for a "strong" war of position. These groups need to build alliances with consumer

groups and drivers affected by rising motoring costs; other commuters such as those using public transport, pedestrians and cyclists; and a range of economic actors challenging the hegemony of the fossil-fuelled car, including low carbon technology companies and alternative energy providers, as well as public transport companies. However, since counter-hegemonic groups 'may lack internal logic or social basis', the war of position could be 'particularly weakened by absorbing or co-opting the active elements of opposition involved in projecting a war of position' (Morton, 2007: 98). Thus, the distinction between a successful war of position and a passive revolution could be blurred.

Crucially, in order to succeed in the war of position there is a need for a strong ideological discourse challenging the hegemony of the car. As Simon (1991: 105) notes, the war of position requires

> [N]ot only the waging of political and economic struggles to create a network of alliances, but also the waging of ideological struggles for a transformation in popular consciousness, aiming to found a new common sense.

Thus, the war of position requires the 'dissemination of radical ideas about man and society' (Femia, 1981:52). This is perhaps the most important and challenging aspect of the war of position, especially in its "strong" variant. How can an anti-car discourse be established within civil society, in a manner that will serve to break from the hegemony of the car? This counter-hegemonic ideology will need to bring people out of their cars, and ultimately challenge their perception of '*who they are* in the world' (Paterson, 2007: 223, emphasis in original). This discourse will need to bridge economic, societal, and environmental aspects of car governance, in a manner that encourages a win-win, anti-car consciousness. This discourse could highlight the economic benefits of not driving in terms of monetary savings, particularly as fuel prices continue rising. It could encourage a healthy, active and more sociable life style, promote environmental awareness, and address oil insecurity.

These are but a few possibilities for the construction of an alternative anti-car discourse. However,

> [A] new ideological system cannot be produced ready-made as a kind of intellectual construction... Rather, it has to be put together and gradually built up in the course of political and economic struggles, and its character will depend on the relation of forces existing during the period when it is being constructed (Simon, 1991: 64).

Thus, a successful war of position, whether "strong" or "weak", will need to address material, organisational, and crucially the ideological and cultural underpinnings of car hegemony. This is a serious, but perhaps not impossible, challenge. The outcomes of this struggle cannot be known, but will unfold overtime.

Overall, the shortcomings outlined above raise questions regarding the explanatory power of the neo-Gramscian perspective. Does the theoretical framework necessitate such detailed empirical data? Or could the theoretical framework be improved in order to account for the rich empirical evidence? As Newell (2008: 519) concedes, in order to

> [A]dequately capture the dynamics of bloc formation and more embryonic forms of coalition evolution across scales, a political economy approach has to be transnational in scale, able to explore dynamics within and across the state, within firms, across "levels" and bridging public/private divides.

Future research will therefore need to address some of these empirical, theoretical and normative challenges, as discussed below.

Future Research Directions

From the above evaluation of the neo-Gramscian framework employed in this thesis, several suggestions for improvement and further research can be elucidated. The final section of this thesis therefore examines possible theoretical, empirical and normative avenues for future research.

Theoretical Advancements

In line with the evaluation of the neo-Gramscian framework presented above, future research will need to identify and apply alternative or complementary theoretical perspectives in order to better account for the role of public and private policy actors in shaping governance processes. As argued in Chapter 8, an international political economy perspective could contribute to understanding the international dimensions of

EU car CO_2 governance. The thesis acknowledged the influence of international forces, such as international climate change agreements and the transnational nature of the car industry, on the policy process of the ACEA agreement, but did not adequately theorise these. Thus, international political economy approaches could provide theoretical insights into the workings of international forces that could be better incorporated into the neo-Gramscian framework of this thesis.

Equally, differences among Member States were not elaborated upon and could perhaps be better explained through a comparative political economy perspective. Future research should seek for synergies between comparative and neo-Gramscian political economy accounts, and aim to combine insights from these theories into a more coherent and clear framework. A comparative account could shed light on the power of various Member States in shaping the ACEA agreement, on varieties of capitalism within Member States, and on the relations among national political and civil societies.

Institutional approaches could be applied to understanding the influence of the EU institutions over policymaking. These approaches could perhaps account for the powers of the Commissions, the Council of Ministers, and the European Parliament in shaping the policy process of the ACEA agreement. Further, institutional approaches could help explain the strategies of different carmakers in car CO_2 governance. Future research could also explore possible synergies between neo-Gramscian and neo-pluralist approaches. These theories both acknowledge the power of business interests over other political groups, and the dispersion of power among a range of public and private actors (see e.g. Falkner, 2008: Chapter 2). Indeed, Parsons (1995: 254) argues that theories of network governance are 'multi-theoretic and may be applied by approaches other than pluralism'. There is therefore scope for examining the convergence of neo-pluralist and neo-Gramscian approaches in future research.

The neo-Gramscian framework of this thesis could also be refined. For example, it could better account for the role of technology, conflicts amongst class fractions, and the class dynamics of consumer demand. Incorporating these (and other) aspects into the neo-Gramscian framework could provide a more nuanced neo-Gramscian political

economy account of the governance of car CO_2 emissions in the EU. However, there is a risk that through the expansion of the neo-Gramscian framework some of its explanatory power will be lost. Future research should therefore carefully assess the trade-offs between the expansion of the theoretical framework, and the maintenance of its explanatory power.

Empirical Developments

Empirically, future research to establish the usefulness of the neo-Gramscian framework could take several directions. Firstly, current and future developments in EU car CO_2 governance could be examined. In 2013, the EU is set to review its CO_2 emissions reductions targets for 2020. An analysis of this process could provide insights into how the historical bloc governing the car is evolving, whether a 'green car revolution' is underway, and whether and how the hegemonic position of the car in European society was maintained through the interactions among various policy actors through strategies of war of position and passive revolution. This account would constitute a direct continuation of this research, and result in a more encompassing historical account of developments in EU car CO_2 governance. In this vein, longer-term development in EU car CO_2 governance, beyond 2020, can at a later date be compared to the empirical and theoretical findings of this thesis. Such an account could provide insights into the evolution of the historical bloc governing the car, and the changes in material, organisational and discursive practices that shape this bloc.

Secondly, an empirical account of car CO_2 governance in other jurisdictions could be pursued, and compared to the empirical and theoretical findings of this thesis. For example, the 2011 revision of the U.S. Corporate Average Fuel Economy standards could provide an interesting case for comparison to the policy process of the ACEA agreement. Such a comparison could establish whether the car was hegemonic in other jurisdictions; how interactions among actors within different (but interrelated) historical blocs shaped their governance; and how material, organisational and ideological practices resulted in the (re)alignment of actors in these blocs. Such an analysis would test whether the findings of this thesis have universal validity, or whether there are differences between jurisdictions that influence the applicability of a neo-Gramscian

perspective. This research could also examine in more detail the different strategies of individual carmakers in response to regulatory demands to reduce average CO_2 emissions of new cars.

Thirdly, research could examine other case studies in environmental governance, in order to assess the validity of a neo-Gramscian perspective. For example, the EU emissions trading scheme seems like a potential candidate for the application of a neo-Gramscian approach, since it was shaped by economic interests, and was emblematic of neo-liberal environmentalism. In contrast, attempting to apply this framework to 'least-likely' case studies, such as water quality, could potentially disprove the explanatory power of the neo-Gramscian theory. Through the application of this framework to other case studies in environmental governance, the reliability, applicability and validity of the findings of this thesis could be better assessed.

Normative Implications

The findings of this thesis can contribute to future research on sustainable transport. The thesis illustrated the hegemonic position of the car in the EU, and hence its adverse effects on the sustainability of EU transport. The car's prominence, the thesis argued, was maintained through economic dominance, the dependence of civil society on personal mobility, and wide-ranging political support. In order to break the hegemonic position of the car in European society, the previous section outlined strategies on two ends of a continuum of a war of position. A "weak" strategy was perceived in terms of the 'greening of the car', whereas a "strong" war of position entailed a shift away from car dependence. Whether "strong" or "weak" change is sought, the findings of this thesis suggest that the governance of car CO_2 emissions requires consideration of the often conflicting interests of economic, social, environmental and political actors at various spatial scales. Further, it was argued that action is required on the material, organisational and ideological planes.

Based on these findings, future normative research could examine how policy instruments and policy packages could encourage a shift towards more sustainable patterns of transport, and thus contribute to counteracting car hegemony and reducing the environmental impacts of the car. To this end, collaboration should be sought with a

wide range of scholars and other 'organic intellectuals' within civil society. These include transport engineers and planners (e.g. Macmillen et al., 2010), scholars studying the strategic response of carmakers to climate-change legislation (e.g. Mikler, 2009; Nieuwenhuis and Wells, 2003; Wells, 2010), and behavioural scientists (e.g. Whitmarsh and Köhler, 2010), as well as representatives from environmental NGOs and other social groups. These alliances could examine the opportunities for and barriers to the uptake of more sustainable patterns of mobility. The neo-Gramscian understanding promoted in this thesis could further inform recommendations for policy measures to address the conflicting demands which often prohibit the uptake of more sustainable patterns of transport.

To conclude, the neo-Gramscian political economy perspective adopted in this thesis provided a useful framework for understanding the complex and contradictory relationships among a range of public and private policy actors involved in EU car CO_2 governance. The theoretical framework further provided a lens through which to observe the evolving material, organisational and ideological practices that framed this governance process. From this perspective, it can be seen that the contradictions between economic and environmental interests, inherent in the EU's efforts to govern car CO_2 emissions, were accommodated through a process of political bargaining, and through a broader alignment of material, organisational and ideological practices. Consequently, the EU's efforts to govern car CO_2 emissions were shaped through a search for synergies between economic growth and environmental protection. Increasingly, environmental protection was seen as a prerequisite for stimulating sluggish economic growth. Efforts to induce a 'green industrial revolution' to accommodate both slow economic growth and environmental protection have been observed. However, the questions of whether this purported 'green revolution' will materialise, and whether it will accommodate these conflicting demands, or simply encourage continued economic growth at the expense of environmental protection, remain to be determined by future alliances among a range of public and private policy actors across multiple spatial scales; and through the alignment of material, organisational and ideological practices.

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